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Resource Development in the Pacific Mandated Islands

By E. C. WEITZELL*

THE postwar Pacific is enveloped by many problems and questions—even before the peace treaty has been consummated. Departments of government, committees, commissions and commercial interests are already making policy, surveys, and plans. They are asking for large sums of money for developing the scattered segments of land which make up the Japanese-mandated atolls, now under the military surveillance of the United States. More and more frequently, social scientists are insisting that we must build an economy for these small areas and that social reformation of the natives must take place.

This discussion poses some of the questions and problems involved in the possibilities for resource development of the mandated islands. It is necessary to make certain broad assumptions and to assume certain qualifications. However, it is not the aim here to engage questions of political policy. The general assumption is that the United States will continue to control the mandates, both governmentally and economically. The general question is: What resource development is feasible?

The Japanese Mandated Islands include the Marshalls, both the Eastern and Western Carolines, and the Marianas, except for Guam. The islands extend over three thousand miles of the Pacific, but the total land surface is only 846 square miles. In 1937 the total civilian population was 112,267, of which 61,323 were Japanese colonists, 50,809 were natives and 135 of other origins. Approximately 65 per cent of the colonists were employed in the Marianas in connection with sugar production. Most of the remainder were employed in phosphate mining and other industries in the Western Carolines.[1]

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[1] In addition, Guam consists of 206 square miles and in 1940 had a total population of 22,290, 90.5 per cent of which were native Chamorros, (*Agriculture in the Japanese Mandated Islands*, OpNav 13-17, C.N.O., Navy Department, 1944, p.1). *Note*: The "OpNav" citations throughout this article refer to *Naval Civil Affairs Guides*, published by the Office of the Chief of Naval Operations, Navy Department.

These islands are of volcanic and coral origins, or combinations of the two. The Marshalls are entirely of coral origin, are small and flat, and in general are relatively infertile. The larger volcanic islands of the Carolines and the Marianas are rather rugged with benches and plateaus of more fertile soils consisting of a combination of volcanic mud, coral residue, and organic materials. The climate is warm and humid the year around, the major variation being in the amount of rainfall. Plant growth is usually very rapid, with corn maturing in from 9 to 11 weeks. Some crops may be grown the year around, depending on rainfall and disease control.

The natives—Chamorros in the Marianas, Kanakas of the Carolines, and the Marshallese—have a recent aboriginal background. To Americans, the living habits are quite crude. Many prefer to live from the fruits and roots of the land rather than to depend on foods which require cultivation and attention. The culture of the Chamorros might be said to be the most highly developed. Primarily this is the result of the introduction of the Catholic religion early in the 17th Century by the Spanish. All social life is centered in the Church. This background provides a western civilization complex which lacks oriental characteristics. The resulting ideals and customs have the effect of orienting these people toward the West, rather than the East.

Prior to World War II

The Mandates have been under the rule of the Spanish, the Germans, and the Japanese since their discovery by the "modern world." Until 1898 the Spanish rule of the Marianas and the Carolines had been undisturbed. Guam was ceded to the United States during the course of the Spanish American War (1898) and, in the following year, the remaining islands of these two groups were sold to Germany. Germany had exercised a protectorate over the Marshalls from a few years preceding. The German claims were uncontested until 1914 when the Japanese began to move in and unofficially take over and colonize. In 1922 the claim was supported by the Mandate which gave Japan authority over all three groups, excepting the Island of Guam in the Marianas.[2]

Under the Spanish regime only minor efforts were made in behalf of developing trade. Shells and small amounts of copra were bartered from the natives, and a naval base was established on Guam. Practically no effort was made to develop the scattered natural resources.

The Germans were more aggressive in this respect. Copra and phosphate were both developed considerably. During these periods the United States made no attempt to seek trade from Guam or other island locations. But even before 1914 the Japanese were operating coconut plantations and trading in copra in both United States and German territory, and they controlled the market decisively.[3] Shipping facilities to Manila and the West Coast were essential in order that American trade in copra could be developed. In general, it was true that the United States was interested in Guam principally as a naval base, and such trade as was developed was more or less incidental.

[2] OpNavs 50E-1, 50E-5, 50E-7, and 50E-8 (Political History Sections, O. of C.N.O., Navy Department, 1944.)

[3] *Annual Report,* Guam Agri. Exp't Sta., p.7, 1911.

When the Japanese began to take over in 1914 they immediately seized the phosphate mines on Angaur, West Carolines, and the railroads and other facilities in the Marianas. By 1922, when the mandate became effective, the development of the "Coprosperity Sphere" under the administration of the South Seas Government was well under way.

Japanese Colonization and Development

Requisites to resource development of any kind in this area are basic knowledge, certain skills, and cheap labor. These the Japanese proceeded to transfer from Japan, Okinawa, and Korea by subsidized commercial enterprises and colonization. In the Marianas the production of sugar was their major aim. In the Carolines, fishing, phosphate mining, and the shell industry predominated, while copra continued to be important, in general. Later phosphate and other minerals were mined in various locations. In addition, numerous subsistence vegetables and fruits, both native and Japanese, were produced. Although a preferred native food, manioc or cassava starch became an important export item.[4]

Japan was continually seeking expansion in food and fiber production, and for this purpose several experiment stations were established in both the Marianas and the Carolines. The improvement of sugar cane and the development of cotton were the two principal aims. In addition, numerous fruits, vegetables and shrubs were being acclimated and tested.

In terms of land use, the only statistics available for the mandated islands were originated from reports of the Japanese South Seas Government. They are significant only if Japanese techniques and methods are understood. Certain qualifications are essential in presenting the data in Table I. *First,* it must be clear that almost half of the 135,000 acres of land reported as cropland (1937) is actually coconut

[4] OpNav 13-17, *op cit.*, pp. 23-24.

TABLE 1. CROPLANDS OF JAPANESE MANDATED ISLANDS, REPORTED BY JAPANESE, 1937.[1]

CROP	REPORTED ACREAGE				
	Marianas[2]	East Carolines	West Carolines	Marshalls	Total
Sugar cane	28,355	3	20	.....	28,378
Coconuts	7,084	29,367	13,356	29,901	79,508
Breadfruit	350	8,608	195	862	10,015
Fruits[3]	1,204	337	1,326	30	2,897
Vegetables[4]	5,957	2,578	3,835	20	12,390
Other[5]	1,386	117	76	.....	1,579
Total	44,336	41,010	18,608	30,813	134,767
Undeveloped arable land[6]	45,580	985	6,925	7	53,497

[1] Compiled from OpNav 13-17, O. of C. N. O., Navy Dept., 1944.
[2] Excluding Guam. Estimates by the Guam Department of Agriculture reveal that approximately 17,000 acres of land on Guam were "cultivated" in 1939. Of this total some 13,000 acres were devoted to coconut plantations. This leaves a total of 4,000 acres devoted to corn, rice, sweet potatoes, tapioca, taro, and other vegetables and fruits. (See Laura Thompson, *Guam and its People*, Inst. of Pac. Rels., 1942, p. 123.)
[3] Including pineapples, bananas, citrus, and others.
[4] Includes manioc (cassava), which accounts for more than 50 percent of all vegetable acreage.
[5] Includes coffee, dry-land rice, cotton, tobacco, and peanuts.
[6] These estimates by the Japanese of the undeveloped "arable" lands may include large acreages of quite rough land, similarr to large acreages of sugar-cane lands which must be tilled by hand methods.

and breadfruit lands, a large portion of which is more or less in the native state. *Secondly,* that a large proportion (perhaps 60 per cent) of the sugar cane land in the Marianas is too steep and rough to be tilled except with bulls and hand labor. Some of the remainder exists in plots and patches that are too small to be effectively and efficiently operated with machinery. *Thirdly,* since these estimates were formulated, American military installations have been made on a very considerable proportion of the land that was formerly most suitable for agricultural production. In many instances, even if these installations were discontinued, the character of the land has been so deranged by grading, coral roads, and overlays that its future use for farming would be greatly or totally impaired.

With these qualifications in mind, the character of Japanese land use and farming operations may be described. Saipan, Tinian, and Rota islands, in the Marianas, possessed almost 82 per cent of the cultivated cropland in the Mandates (coconuts and breadfruit are not cultivated), as reported for 1937. Sugarcane accounted for 76 per cent of all cultivated land for the Marianas and for 62 per cent of all cultivated lands in the entire Mandates. Saipan and Tinian cane yields compared favorably with most producing areas, except Hawaii where the 1930-39 average of 57.8 tons per acre is slightly more than twice that of the Mandated islands.[5]

Breadfruit and coconut lands are often of suitable character for the prevailing types of farming, except that they require clearing if any other crop is to be produced. This the Japanese did thoroughly where sugar cane was desired. To a very large extent fruit and vegetable lands are rough and steep, as in the case of a considerable portion of the manioc plantations (see footnote 4 on Table I); and in other cases they appear in small areas or have an underlying water table so near the surface that heavy machinery cannot be used on them.

In view of these circumstances, and after deducting for lands totally or partially appropriated for military installations, it is probable that not more than 10 per cent of that land cultivated by the Japanese could be so farmed by modern machine methods similar to commercial practices employed in the United States. More than 75 per cent of this acreage is in the Marianas.

It should be clear that, *if substantial acreages are to be cultivated much labor and use of hand methods are essential* to a very large degree. The Japanese were resourceful in this respect. They were able to supply sufficient labor to cultivate small plots, as small as one-quarter acre or less, and to plant sugarcane, manioc, and other crops on rough coral lands that would be useless if labor saving machinery were to be employed.

Moreover, it is important to understand that the natives of the Mandates do very little actual land cultivation if left to their own devices. They prefer to depend on the spontaneous native products which require a minimum of care and attention. Coconuts, breadfruit, taro, yams, bananas, and other tubers and fruits of perennial growing habits are a major source of their diet. Small patches of corn, sweet potatoes, squashes, and beans may be added by the more industrious, but after planting they are often neglected. Even on

[5] OpNav 50E-11, O. of C.N.O., Navy Dept., 1944, p.5.

Guam, where considerable effort has been exerted since 1909 to encourage the Chamorros to improve their agriculture, most of the native farms can scarcely be distinguished from the "bush."

The native "way of life" is not to be modified readily. However, constant drive and encouragement will produce reasonable results. The military government's agricultural program was reasonably effective on Saipan, under an association-type of organization. Small two-acre units were constantly supervised by native leaders and various types of encouragement were provided.

Phosphate production was exceeded only by agriculture as the most important resource of the Mandates, insofar as Japan was concerned. Both rock and guano phosphates were mined in considerable quantities in several locations. The following tabulation indicates the production of phosphate in 1939:[6]

Island	*Tons*
Angaur	158,092
Fais	48,304
Peleliu	28,994
Rota	47,993
Saipan	22,794
Tobi	4,706

The unmined deposits in the Mandates are estimated to be three to four million tons of high grade rock and perhaps twice this amount of low grade rock. Angaur Island is the principal storehouse. These deposits are reported to vary from three to six feet in thickness, and to yield 39 per cent phosphorus pentoxide.[7]

Fishing was the third major enterprise developed by the Japanese. The entire area is well supplied with numerous kinds of fish, and operations were centered in the islands of Palau, Truk, and Ponape in the Carolines, and at Saipan. Of the total catch of 35,274 metric tons reported for commercial fishing in 1937, slightly more than 77 per cent was for the Palau and Truk districts. Although this total catch represented less than 1.5 per cent of the Japanese Empire catch for that year, fishing may be an important enterprise in terms of projected plans for economic development of the mandated islands.

In addition to commercial fishing, which is a specialized trade carried on in the open sea, the natives do a substantial amount of subsistence fishing in the lagoons and around the island reefs. This supplies meat for the diet since livestock are not produced in adequate quantities for providing continuous meat supplies. Special shell, shark-fin, sponge, and pearl industries were also important in the West Carolines.[8]

Livestock production by both natives and Japanese was limited, for the most part, to work stock and subsistence swine, poultry, cattle, and goats. Immediately prior to the War, the Japanese started to step up the production of hogs in the northern Marianas for provisioning troops stationed in the central Pacific. They were fed from the bountiful supply of copra available in these islands.

Although no records are available, two farmers on Saipan are known to have produced milk for sale. Accord-

[6] OpNav 13-17, *op. cit.*, p. 39. Also see OpNav 50E-7, *op. cit.*, p. 158. The proportions of the total production being guano and rock phosphate are not reported in available references.

[7] *Ibid.* (For a more complete analysis of phosphate resources of the Pacific Islands see A. N. Gray, *Phosphates and Superphosphates*, Interscience Publishers: 1945), pp. 78-79.

[8] OpNav 50E-20, O. of C.N.O., Navy Dept., 1944, pp. 1-15.

ing to Japanese reports, less than 20,000 gallons of milk were produced in all the Mandates annually.[9] Most cattle were of low quality for milk production, and were kept mainly for draft work and occasional slaughtering. Usually, the consumption of pork and beef was limited to festive occasions because of the limited supplies available.

Industrially, the Japanese developed only to sustain sugar, fish, and phosphate production. Three large mills, capable of processing 34,000 tons of cane daily, were located on Saipan and Tinian. Rota also had sugar-milling facilities. Sugar, molasses, liquor, and alcohol were manufactured. Sustaining and subsistence industries in various locations included small cement plants, narrow gauge railways, certain food-processing plants, salt production, charcoal factories, handicrafts, and small copra mills. From a commercial standpoint these limited operations were of no importance, except for local needs.

Most of the seafood production was processed before being exported. Drying was the principal type of processing, while a couple of very small canneries were located in the Carolines and Marshalls.[10]

Japanese copra production was highest in the Marshalls and Carolines, with a total of 17,000 tons produced in 1937.[11] There is a possibility of increasing this production substantially by harvesting in the northern Marianas, and throughout the Marshalls and Carolines. Saipan, Tinian, and Rota have practically no coconuts because of damages by scale insects and the removal of the palms in favor of maximum sugar cane production.

Tapioca starch manufacture was of considerable importance on Saipan, Palau, and Ponape, where an estimated total of 5,500 tons of starch were produced in 1937.[12] As the manioc or cassava is prolifically grown, even on rough coral lands, this might be considered as a valuable local industry. But it is doubtful that production in the Mandates could compete in export markets with established producing areas unless cheap labor were to be made available.

Mineral resources, except the possibility of phosphate as discussed above, probably are of little value to the United States. Small deposits of sulphur, aluminum, manganese, coal, lignite, and certain other minerals are reported.[13] Some have been worked on a more or less exploratory basis in various locations.

All of these small industries were important to the Japanese. They were in need of every addition to food and basic raw material supplies, and they had the labor to exploit the scattered small islands. Subsidies were granted by the South Seas Government for practically every type of development. It should be understood that the *natives* have played little part in these enterprises, except as lands were leased from them and as the more ambitious and talented were employed by the Japanese.

During World War II

It goes without saying that the general effect of the war in the Mandated Islands was *destruction*. Sugar mills,

[9] OpNav 13-17, *op. cit.*, p. 34.

[10] OpNav 50E-20, *op. cit.*, p. 16-18.

[11] OpNav 13-17, *op. cit.*, p. 13. In addition, the estimates for Guam indicate a total of 12,000 acres of coconuts, with a copra production in 1939 of 2,500 tons for export. Laura Thompson, *Guam and its People* (Inst. of Pac. Rel., No. 9, 1942), p. 123.

[12] OpNav 13-17, *op cit.*, p. 24.

[13] OpNav 50E-8, *op. cit.*, pp. 15-16; OpNav 50E-7, *op. cit.*, p. 17; and OpNav 50E-5, *op. cit.*, p. 14.

the greatest investment the Japanese had made, were totally destroyed. The only aspect of this industry remaining is a considerable acreage of unattended cane, which is still growing. All other associated facilities, including the narrow gauge railroads, likewise have been destroyed. In fact, the towns and structural facilities of all types have been reduced to ruin.[14]

Certain other crops, such as pineapple, bananas, and papaya, remain in sufficient quantities to form a basis for native diets and rejuvenated production. Coconut palms were destroyed only on the smaller islands and along the coast lines where naval gunfire was intense, but several of the major coconut-producing islands were not the scene of intensive battles such as occurred on Saipan.

Livestock roams the islands in many cases. where it has not been corralled. On some islands the native practice has been to permit hogs and cattle free range. During hostilities the surviving livestock was left to roam at will, except where chickens, hogs, goats, and cattle were collected by the respective Military Government units to keep them out of the way of military operations and to form the bases for developing native food supplies. Some slaughtering was done for native subsistence; the remainder was saved for reproduction and draft purposes.

After hostilities were over the natives and the Japanese colonists were interned in restricted areas. All resources were in the hands of the Military Government. Where land was available efforts were made to supplement food supplies by producing vegetables and salvaging native fruits and other products. In some cases this was attempted by working parties of natives and Japanese on a daily wage of 35c per day. The most productive method appeared to be to organize farmers into an association with assigned plots to each family so employed, and to pay them only for what was produced. In some instances considerable facilities were provided. Hog and poultry farms were provided on Guam, Tinian, and Saipan; and on Saipan a substantial slaughter house was constructed.

Paralleling the Military Government farming activities in behalf of native subsistence, the United States Commercial Company (formerly a segment of the Foreign Economic Administration) organized a program to produce certain fruits and vegetables for provisioning American armed-force personnel. Considerable machinery, fertilizer, seed, and other supplies were imported. On Guam, a 75-cow dairy and a sizable hog farm were constructed. More recently plans have been approved for extensive expansions of these enterprises. It is probable that USCC will acquire the livestock and other remaining farming operations that were formerly under the administration of the military government. Otherwise, as the Japanese were removed from the Mandates, their farming operations were liquidated. Chamorro and Kanaka farming is being replanned to supply native requirements and to make some contributions to military subsistence.

The situation on Guam, insofar as native farming and military government are concerned, differed greatly from that of the mandated islands. Rather than enemy aliens, the Guamanians are American nationals whose property rights continued as before the war. Thus, the agricultural work was

[14] For additional description of the effects of the War see W. Robert Moore, "South From Saipan," *The National Geographic Magazine*, April 1945, pp. 441-474.

an extension type of program, with various kinds of assistance provided.

Fishing was an important function of the military government subsistence programs on the larger islands, particularly on Saipan, Tinian, and Peleliu. Japanese sampans and other craft were salvaged and placed in operation. Charmorro and Japanese fishermen manned the boats. Considerable facilities were constructed, including ice plants and reefer cold storage.

The handicraft industry was encouraged and native shops were established for making souvenirs. In general, locally-grown materials are the basis for this enterprise.

Most of the laborers employed in the various activities carried on by the respective military governments and the United States Commercial Company were of Okinawan, Japanese, and Korean origin. Their repatriation to their homelands removes this valuable source of labor from the Mandated Islands. The relatively few employable Chamorros and other natives will likely be engaged continuously by military establishments and general maintenance work. It is doubtful that any substantial amount of labor will be available for any type of resource development, unless it is colonized from more densely populated locations.

In the Future

The future of the Pacific Mandates will depend on the provisions of the final peace treaty. Assuming that the United States may retain some degree of jurisdiction, there are at least three alternative policies that might be followed relative to resource development: (1) administer as strategic bases with little or no attention to resource developement; (2) permit and encourage public and private development with or without subsidies; or (3) permit foreign interests to develop specified resources.

The administration of Guam as a naval base since 1898 has given little attention to resource development.[15] The Chamorros on Guam have lived within their native cultures to a very large extent. The English language was taught in the schools and most of those employables who desired work have been employed in connection with the Island government. The Office of Experiment Stations maintained an Agricultural Experiment Station at Agana, Guam, from 1909 to 1932, and considerable effort was exerted to improve subsistence crop and livestock production. Other subsistence enterprises, including a soap factory, were established. Copra has been the only item of export given any substantial attention. Considerable progress was made in improving the quality of this product.

A similar policy might be followed in the future throughout the Mandates. That is, limited attention might be given to the improvement of subsistence production and the general welfare of the people, with some assistance to the development of copra production for export. Two factors strongly favor this policy: (a) This procedure will be almost mandatory in most atolls unless additional labor is brought in. Military activities will likely absorb all employable natives at wages much higher than any alternative private employment would pay. For example, the relatively small number of Chamorros (less than 5,000) left on Saipan and Tinian could be quickly

[15] It is said that, whereas the relatively productive and larger Island of Guam exported annually only about $100,000 worth of produce, Saipan exported $7,000,000 worth of commodities under the Japanese. (See Willard Price, "Springboards to Tokyo," *The National Geographic Magazine*, October 1944, p. 407.)

absorbed in public works and the maintenance of roads and other installations. The development of adequate farming to fulfill native dietary needs will be a problem, in competition with nonfarm employment. (b) The limited budgets available for island development work may make it necessary to follow a very limited program. It can be expected that pressure-group interests will try to prevent the development of any resource that might reduce the demand for production from already established firms. And the usual reluctance to appropriate funds for overseas activities may restrict any type of public development to a minimum in the future. Present activities are still enjoying the momentum and freedom of wartime appropriations.

Public Interests

The *second* alternative might take several forms. Public agencies might be authorized to operate on a commercial scale, or private agencies may be allowed privileges and access to available resources with or without cost, or even with public subsidy of some kind.

To many, it may not seem likely that the United States would find it desirable to subsidize the development of any of the resources to be found in the Mandates, owing to long distances, high costs of production, and the relatively small potential volume that would be possible. On the contrary, the United States Commercial Company,[16] a subsidiary of the Reconstruction Finance Corporation, is currently engaged in an extensive program of agriculture, handicraft production, and trade store development throughout the Mandates. Originally, the Foreign Economic Administration was authorized to produce vegetables for military personnel located in the islands and these projects are now being continued under the United States Commercial Company. The volume of production attained has been rather insignificant in terms of subsisting the large number of personnel stationed in the respective locations, the exorbitant costs of production, and the problems that have been encountered. Native handicraft shops and trade stores, formerly operated by military government supply departments, have more recently been added to U.S.C.C. activities.

In addition to truck farming and papaya orcharding in several locations, the United States Commercial Company established a 75-cow dairy and a feeder hog project on Guam. Recent authorizations have been given for expanding these projects, and the acquisition of military government livestock projects on certain other islands is being considered. These latter projects consist entirely of livestock captured or produced where now located, whereas the livestock of the United States Commercial Company on Guam was imported from the United States. The aim of these continued farming operations is to provision military subsistence, while the handicraft and trade-store projects are planned to assist the development of native economies.

The local production of fresh products for military personnel would appear to be a laudable purpose. However, in terms of alternatives, during peacetime when shipping is available, numerous questions might be raised. (a) It is doubtful that the high costs involved in this operation can be economically justified, judging from past

[16] The United States Commercial Company was transferred from the Foreign Economic Administration, the latter being discontinued, to the Reconstruction Finance Corporation by Executive Order 9630 as of September 27, 1945.

experience. (b) Refrigeration and transportation facilities for transporting fruits, vegetables, meats, and dairy products of high quality from producing areas in the United States can provide all these requirements almost as cheaply as 95 or 98 per cent can be supplied. Moreover, experience to date indicates that inspecting military personnel disfavor locally-produced vegetables and meats because of their relatively low quality and the risks of parasites and diseases often carried by tropically grown commodities. This disfavor will be even stronger under peacetime conditions. (c) Local labor for such enterprises will be scarce, and the cost of American labor will be high. (d) Considerable quantities of feed, fertilizer, seed, machinery, and other supplies have to be imported. The cost of transporting these items may be as great or greater than would be required to transport the amount of production that would result from their use. Even during the war this point was strongly contended. (e) The cost of developing adequate grazing and forage for dairy cattle of high producing-capacity will be high, particularly during the dry seasons of the year. (f) The usual aversion to making appropriations to overseas enterprises which may reduce the demand for products of established interests in the States may be strong. One need merely to recall the discontinuance of funds for the Guam Agricultural Experiment Station in 1932 to have reason to believe that the funds for maintaining these installations are likely to be discontinued sooner or later. Thus, expensive dairy plants and other improvements may be left to mutely tell the story!

Insofar as handicraft is concerned, it is difficult to imagine that the United States Government should appropriate funds for the purchase and operation of native handicraft shops. Handicraft undoubtedly is an enterprise lucrative to native peoples; but since the products of these enterprises will surely be sold locally to military persons and tourists it would appear that they could be administered entirely on a local basis. Actually, to date, the quality of most of the products has been of such a character that they would not stand the competition of any well supplied handicraft shop. Values arise only because of origin, the buyer desiring a souvenir from "an island he has conquered." If there is any real hope that handicraft enterprises will pay their own way, private interests are likely to pick them up.

Trade stores are in almost the same category as handicraft. It may be true that we have a responsibility for provisioning these native peoples under our jurisdiction. But it is also true that natives are and will be operating these trade stores. It is hardly feasible that a separate government-salaried personnel is needed to supervise them, or to act as a middle-man in supplying them. During the war, Naval Supply provisioned many times the number of people remaining on the islands. There is little reason why such a medium might not continue to supply local native requirements so long as Naval government is in force, if private enterprise is not interested. A duplicating supply line for so few people would seem unjustified, particularly as many items of subsistence are identical. Actually, Guam possesses more natives than any other location involved, and their prewar supply of essential items through private and naval facilities apparently was adequate.

Fishing is another venture that was developed considerably at public ex-

pense, principally through the facilities of military government units. The aim was to supply food for civilian internees and military personnel. Regarding the future of these fishing developments at least three observations are in order. First, the rather large numbers of Japanese, Okinawan, and Korean internees formerly supplied with subsistence are now gone. Secondly, the armed force personnel showed little interest in the type of fish provided—i. e., it did not prove to be a popular food item. Thirdly, the extensive facilities provided are still there — in at least three locations and are mostly unused. It is doubtful whether there will be sufficient future public need for these installations and equipment to justify a public program of any kind.

Private Interests

It is extremely doubtful whether private interests in the United States will be concerned with commercial fishing in these distant waters. More productive waters nearer home, and served by established processing installations, will be more attractive; as they were to the Japanese who came across the Pacific to fish them. However, there is good reason to believe that Japan and other Oriental countries may be greatly interested in the fish resources of the Mandated areas, particularly if restrictions are placed on supplies from other areas.

It is possible that private enterprise in the United States may be interested in at least two resources of the Mandated Islands — *copra and phosphate.* Although before the War most of the copra from these islands (excepting Guam) went to Japan, there is reason to believe that this copra may find a ready market in the States, depending on competition from other oil crops. Even if our markets do not want it, certainly Chinese and Japanese markets might. The production of copra requires no elaborate facilities, labor being the major item. Native farmers may be able to supply sufficient labor to harvest an exportable volume if organized properly.

The principal phosphate deposits may attract private development for either Philippine or Oriental markets. The great distance to the West Coast would make the product costly to United States farmers, and it is doubtful that the volume and quality would be such as to overcome this high cost. On the other hand, the demand for fertilizer in Japan and China would certainly provide a ready market. At present the demand for fertilizer in Japan is acute. It is entirely possible that redevelopment of the phosphorus deposits in the Western Carolines could supply a significant portion of the fertilizer now being shipped to Japan and Okinawa from the States.

Along with handicraft, the shell and pearl industry of the Carolines and Marshalls may attract development. Japan formerly harvested and processed quantities of shells from this area for export to our markets in the form of buttons and jewelry.

Insofar as sugar, pineapples and other fruits are concerned, the relatively high costs of production in the Marianas probably would render competition with established producing areas impossible. However, in terms of world demands for these commodities there may be reason to anticipate their development if reasonably convenient access to available land resources is provided.

Asiatic Interests

The Japanese were interested in the Mandates for a very practical reason.

They had a starving demand for even the smallest additions to "homeland" diets and raw materials, and they had plenty of cheap labor to colonize the islands. Now and in the future, food and raw materials even in small quantities may be in demand in this and other portions of nearby Asia. Certainly, the present condition of world food supplies would indicate that any substantial area of land might well be made available to needy nations for the production of essential commodities.

Immediately, the problem of making land resources in the Mandates available for development by foreign interests is apparent. According to military law, the captured lands of these "enemy" islands are or will be the property of the United States unless the peace treaty decrees otherwise. The disposition of formerly native-owned lands has not been determined, although it is likely that allocations will be made to those formerly owning land, at least. It may be presumed that lands suitable for development might be leased from the United States by either domestic or foreign interests under terms that would safeguard the security and other interests of the United States and its Allies.

Development Problems

Whether the resources of the Pacific Mandates are developed by people from the United States by foreigners, or by natives, numerous problems will be encountered. The most apparent and probably the most important is the lack of labor. For example, on Saipan, Tinian, and Rota—where most of the arable farm land is located—there will be fewer than 5,000 Chamorros left as the total population when all Asiatics are repatriated. As indicated above, practically all the employables among them will be hired by military establishments and private services of various kinds.

Consequently the first requisite to development is colonization from some source, in order to build a labor supply. Of the people who might be available for such colonization, Filipinos would probably be the most satisfactory to the United States. But possibly both Chinese and Japanese may be satisfactory. Presumably, the type of labor required would depend on the type of development to be made, and the developing interest.

Second only to the need for labor is the problem of cultural practices. The intense necessity for relatively large numbers of laborers is due to the fact that cultural practices involving labor-saving machines cannot be used extensively. The character of the land, the frequency of rainfall, and the rapid growth of weeds necessitate much labor. This is generally true, even where the soil may be broken and roughly prepared by machinery. Erosion is another serious problem where large fields having any slope are cultivated. This was especially apparent on Guam and Saipan where papaya orchards and certain crops have been clean cultivated—heavy tropical rains quickly wash the topsoil off. This situation is not nearly so severe on small native farms of two acres or less where only small continuous areas are devoted to clean cultural practices. A variety of crops and alternating smooth and ridge cultivation of vegetables were very important in controlling erosion on Saipan. This is another noteworthy reason why machinery is deficient. In certain instances where the soil is of sufficient depth, broad berm terraces may assist a certain amount of machine cultivation.

Water supplies are of the utmost importance everywhere. On the larger islands the military organizations have installed water supplies that are adequate—except for irrigation during the dry seasons. Almost all of the readily available supplies from shallow wells are brackish; this is particularly true of the islands of coral origin. Native livestock appear to get by on brackish water, but it is unsuitable for irrigation.

Many varieties of insects attack almost every type of farm crop on the islands. The European corn borer, the corn ear worm, aphids, leaf hoppers, and the coconut scale insect are notorious examples. As the seasons are more or less continuous, control measures must be intensive. Frequent rains necessitate almost continuous spraying and dusting for both sucking and chewing insects.

Plant diseases[17] also are extremely troublesome, particularly bacterial and fusarium wilts of tomatoes, and downy mildew of beans and cucurbits. Seasonal variations in their severity are noticeable. For example, tomatoes survive best during January and February when rainfall is light. In numerous cases resistant varieties appear to be the only answer to problems of disease.

Animal parasites and animal diseases are common. Intestinal and stomach worms of all descriptions attack poultry. Lung worms and pneumonia take their toll of swine. Liver and lung flukes are a serious menace to cattle. Goats seem to be the only livestock not seriously menaced by parasites and diseases, but large numbers are frequently killed by dogs.

[17] For adequate descriptions of the insects and diseases prevalent in the Mandates, refer to *Annual Reports* of the Guam Agricultural Experiment Station, 1911 to 1932 (Reports of the Entomologist), Office of Experiment Stations, U. S. Dept. of Agriculture.

There is a definite lack of honey bees and other pollinating insects in the Marianas and elsewhere. Whether these types of insects were always scarce or whether they were destroyed by repeated aerial spraying with DDT is not known. Some bee colonies have survived, and there is usually sufficient flowering material from which subsistence honey can be procured.

Fertilization of most crops is highly desirable and in many instances is necessary. The soils of the volcanic islands, if weathered considerably and with a substantial accumulation of organic matter, will produce certain crops without fertilizer, but good yields of a suitable quality usually depend on medium-to-light applications of complete fertilizer. Contrary to certain recent recommendations, heavy applications will quickly produce a burning effect and this procedure is wasteful because of the very rapid leaching of most of these soils.

The lack of suitable pastures and forage for good subsistence cattle is readily apparent. As long as livestock is parceled out to native farmers it is fed sweet potato vines, weeds, napier grass, and wild grasses. But for even a small herd of dairy or general purpose cattle, adequate pastures and forage are definitely lacking and protein forage is almost nonexistent.

Summary

In summary, it may be said that there are certain definite opportunities for development in the Pacific Mandated Islands. Most of the problems of development can be solved, but their solution will take patience and understanding. A type of labor will be required that knows tropical farming and tropical industries. We cannot hope to

transplant the cultural practices of Iowa or the San Joaquin Valley to these islands and expect to be successful. So far as the United States Government is concerned, any public development should be justified in terms of costs and benefits, and alternative procedures. The welfare of the natives is of concern and to the extent that reasonable subsistence is provided, we have a genuine responsibility. However, it is highly desirable that farming and other enterprises be developed slowly on the basis of prior American experience on Guam and Japanese experience throughout the Mandates. Rapidly expanded governmental projects are too likely to result in failure and waste, which in turn may establish prejudices against limited and desirable resource development. Immediate attention should be given to the possibility of permitting the development of those resources in which we are uninterested by those people of nearby Asia for whom the Allies are accepting far-reaching responsibilities in behalf of health and welfare.

Farm Land Values in the Southeast

By DUDLEY YOUNG*

Introduction

THE level of farm land values and of land market activity is vitally important to farmers, consumers, and policy makers. Land prices justifiable at customary returns per acre are often an inescapable barrier when farmers wish to shift to a less intensive pattern of land use. High land prices and heavy debts are a substantial argument for continued subsidy of farm commodity prices, for it is obvious that a serious decline in prices received by farmers will bring wholesale foreclosure on the heads of those farmers who mortgaged themselves heavily to buy land during periods of high prices. The repercussions of such a financial disaster reach far beyond the farmers immediately concerned and may seriously affect the economic welfare of the whole Southeast.[1]

The problem is particularly severe because cotton is the major crop in this area and cotton prices have been held above the world level for more than a decade by government action. The increased income resulting from such a program was, to a considerable degree, capitalized into "top-heavy" land values. Wartime increases in land prices have been imposed on this already shaky framework. Alternative land uses which provide a return per acre equal to that received from a subsidized cotton crop and acceptable to the bulk of farmers in the Southeast have not yet been developed.

Hence, it follows that high land prices introduce serious rigidities throughout the farm economy, limit the flexibility of programs which might be directed toward a farm pattern more in accord with a full employment high consumption economy, and may result in higher prices to consumers of farm products than would be justified on the basis of an efficient agriculture.

The seriousness of the present situation depends on the number of farmers buying land, the extent to which they depend on credit, and what incomes they can expect in the future. Accordingly, this paper indicates the volume of sales, the prices at which they have been made, the amount and types of credit used, the types of sellers and purchasers, and some hypothetical statements of possible future income situations.

Situation

Volume. The volume of farm sales is high throughout the Southeast. In 4 of the 5 states of this Region activity was greater in 1944 than in any year since state figures were first made available in 1926. In Florida the local land boom reached its peak in 1926 and did not subside to a level comparable to that in the other states until 1928. Since 1928 the level in Florida has followed approximately the same curve as that of other states in the Region and by 1944 it was above the 1928 figure (Chart 1). Data for 10 selected counties from the land market survey show that activity in 1943 and 1944 was much greater than in 1941 and 1942.[2] There were approximately 2,000 transfers per year in 1943 and 1944 compared with about 1,200 per year in

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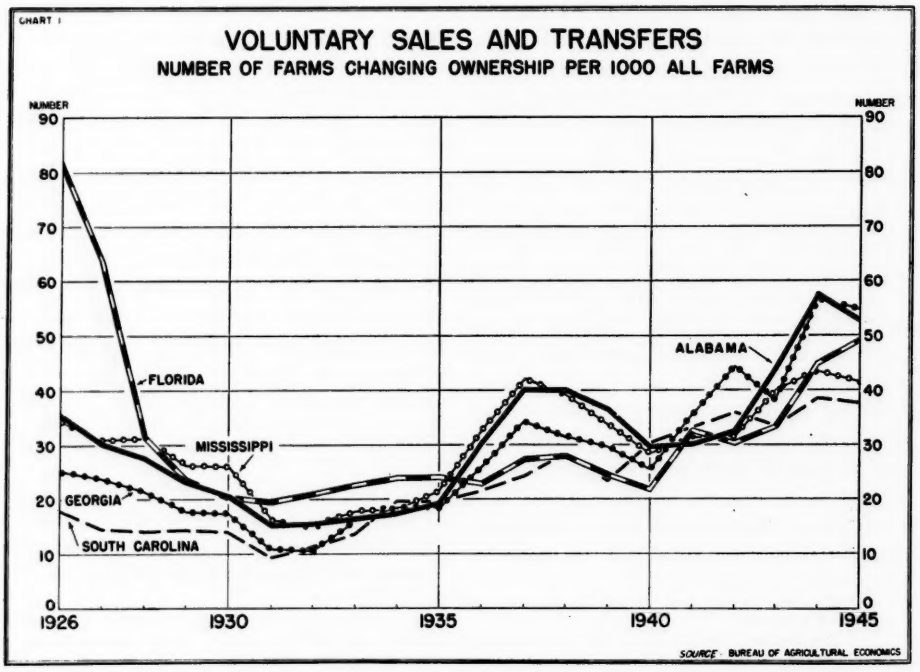
[1] The Southeast as referred to includes Alabama, Florida, Georgia, Mississippi, and South Carolina.

[2] These data have been collected in quarterly field surveys since 1941 by members of the regional Bureau of Agricultural Economics staff.

1941 and 1942 in these 10 counties. While increases in volume of transfers were fairly large in most of the counties sampled, they varied greatly in degree. The county with the greatest percentage increase and the largest number of sales was in the citrus section of Florida. The only counties where activity was less in 1944 than in 1941 (measured both by number of sales and acreage transferred) were in the Black Belt of Alabama and the Mississippi Delta. These decreases were the result of atypical situations. Agriculture in the Black Belt has been shifting rapidly from cotton to beef and dairy farming during the past decade, small owners are not so numerous as in most areas, and the ownership pattern is not at all fluid; in the Mississippi Delta the inflation of land values occurred earlier than in the rest of the South.[3] There was some decrease in activity during 1945 but opinions are divided as to whether this is the lull before a sharper storm or whether it indicates that the inflationary peak has been reached.

The increasing number of voluntary sales and transfers during the war years has been accompanied by a substantial decrease in forced sales and related defaults—sales for taxes, mortgage foreclosures, bankruptcies, and transfers to avoid foreclosure. Transfers for inheritance and gift have also dropped sharply in number. As a result of these changes in types of transfers the increasing number of voluntary sales has had relatively little effect on the total number of tracts changing hands. This total volume of transfers was approximately the same for 1944 in most of the states as it had been in 1937 and much lower than it had been between 1932 and 1937. The changing proportions of voluntary and forced

[3] D. E. Young, M. A. Brooker, *and* F. J. Welch. "Rural Land Market Activity in Mississippi," Miss. Agr. Expt. Sta. Bul. 406.

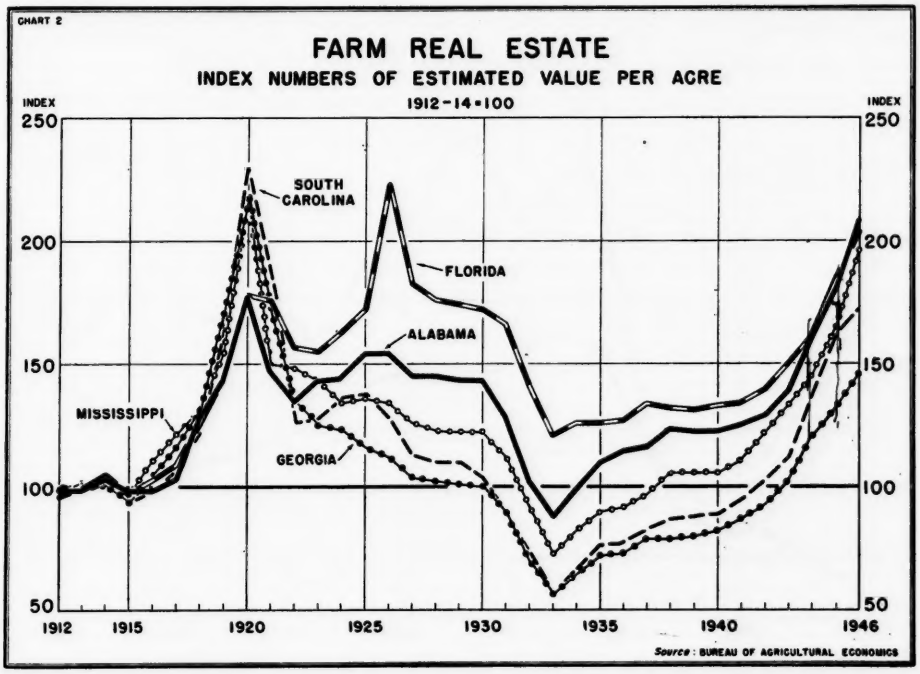


sales have undoubtedly contributed to the changes occurring in the land value index[4] (Chart 2). In a falling market the increasing proportion of forced sales acts to depress the price of land while in a rising market forced sales decrease, unwilling owners soon sell their holdings, and prices must rise in order to bring voluntary sellers on the market.

Value and Price. Farmers' estimates of the value of farm lands and buildings have risen sharply during the war years. If 1935-39 estimates are taken as 100, the index in March 1946 ranged from a low of 157 for Florida to 209 for South Carolina. The trend is very similar to that during World War I when, if 1912-14 is taken as 100, the index in 1920 ranged from a low of 177 for Alabama to a high of 230 for South Carolina. The fact that the upward trends in land values have roughly paralleled those of the last war does not mean that the collapse which occurred in 1920 must be repeated after the end of this war. It is, however, a strong argument for caution.

Increases in the price per acre of farm lands are also apparent in the figures obtained for 10 sample counties in the land market activity survey. The average price per acre of citrus groves, including all ages of trees, sold in Lake County, Florida, in 1941 was $344; by 1944 this had risen to $676, an increase of 97 percent. Farm lands in the Cotton Belt did not cost nearly so much per acre as the citrus groves of Florida but they showed similar price increases. In the Coastal Plain of Georgia, the average sales price of Sumter County land rose from $14 per acre in 1941 to $21 in 1944, a 50 percent rise; in the Piedmont, Walton County farms averaged $18 an acre

[4] The Bureau of Agricultural Economics index of average values of farm real estate computed from crop reporters estimates of average farm values.

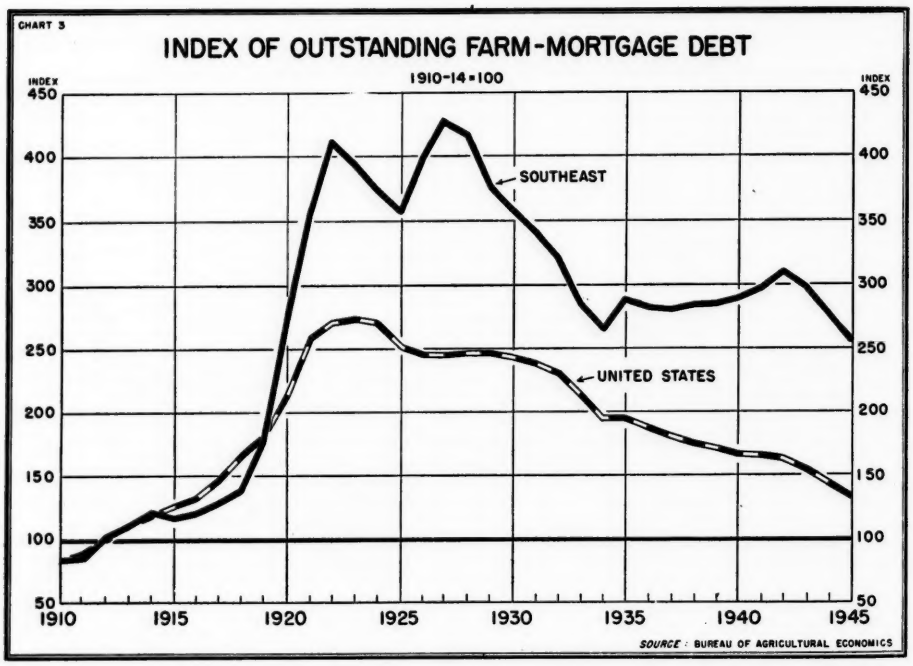


in 1941 and $26 in 1944, a 44 percent increase. The farm lands of Washington County, in the Mississippi Delta, jumped from $38 per acre to $61, climbing 61 percent in price, in the same period. It must be emphasized that these prices, with the exception of the citrus groves, are not computed on the basis of cropland alone, but include many acres of woodland, often of a very low value.

Credit. The total farm-mortgage debt for the 5 states of this Region has declined since 1942. This is in line with the trend for the United States (Chart 3). In general, debt has been higher in relation to value in the Southeast throughout the period from World War I to the present than it was during 1910-14. The debt in 1945, approximately 310 million dollars, was more than 3 times as great as in 1910 though it was less than for any preceding year since 1919.

Seventeen percent of all bona fide voluntary purchases in 10 counties in the Southeast were mortgaged for 75 percent or more of their purchase price in 1944. The mortgages involved in credit-financed transfers have been growing in size since 1941 and averaged $3,549 per sale in 1944, which was 21 percent more than in 1941. Individuals made approximately two-thirds of the loans to finance the purchase of land in 1944.

Average farm mortgage interest rates declined sharply in the thirties, in part because of introduction of relatively large amounts of low interest credit through federal or federally-supervised loan agencies. For the seven years, 1935-41, the debt outstanding as a result of credit furnished by the Federal Land Bank, Federal Farm Mortgage Corporation, and Farm Security Administration exceeded that from all other sources combined. The average rate of interest



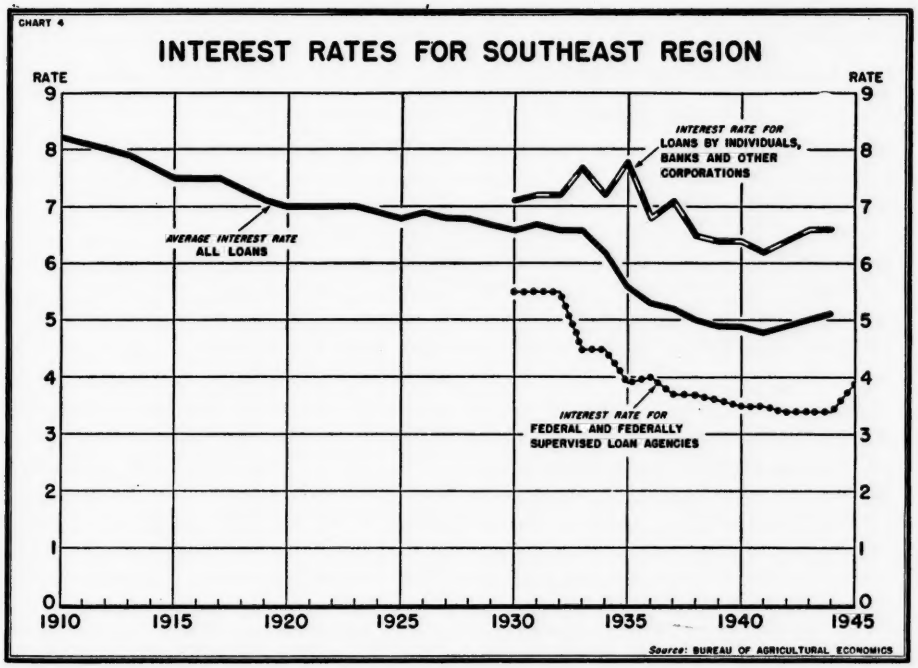
payable, which had been declining gradually since 1910, dropped rapidly during this period from a level of approximately 6.5 percent in 1933 to around 5 percent from 1938 to 1944. The interest rate on loans furnished by non-governmental sources was evidently affected by this competition. From 1930 to 1935 this rate fluctuated between 7.1 and 7.8 percent, but in the forties it varies around 6.5 percent. (See Chart 4.)

It is not believed that the decline in the average rate of interest payable which has taken place since 1933 has been accompanied by a similar decline in the "capitalization rate." The capitalization rate responds primarily to expected rates of return from alternative investments. In this instance the obvious alternative would be real estate mortgages and since the rate received on loans from private sources is considerably above the average it is felt that the capitalization rate would correspond more nearly to the private rate.[5]

Interest rates higher than those prevailing in other sections of the country predominated in the Southeast in spite of the importance of federal lending agencies. The interest rate was 6 percent or more for 64 percent of the 547 new mortgages on land purchased in the 10 sample counties during 1944 for which the rate was known. In a similar sample of counties in the North Central Region 81 percent of the mortgages had interest rates of 5 percent or less. A large proportion of the loans in the Southeast were for short terms as well as being at high rates of interest. More than half of them were for less than 5 years while less than one-fourth were for more than 10 years.

[5] For a fuller discussion of factors influencing the capitalization rate see U. S. Department of Agriculture Circular 743, "The Farm Real Estate Situation, 1944-45."

CHART 4



Two-thirds of the mortgages were fully or partially amortized.

There were practically no cases in which purchasers who already owned land included more than the land purchased as security for the loan. It is not known how many farm owners buying additional land borrowed money on their farms before buying the new tract so that they could pay cash or make a substantial down payment. This type of financing had disastrous results after World War I when farmers often lost not only the land they had recently bought but their home farms as well when they failed to meet mortgage payments.

Types of Buyers and Sellers. There is little overt evidence of speculative activity in the Southeast Region. Three-fourths of the purchases were made by farmers and three-fourths of these farmers were already landowners at the time of their purchase. Slightly over one-half of the sales were by farmers. Eighty-four and seven-tenths percent of the buyers made no more than one purchase during the years 1941-44. Although only 0.6 of a percent of the buyers made more than 6 purchases, they accounted for 9.0 percent of the land purchased. Hence, it may be seen that their activities involved a considerable acreage though they were an insignificant proportion of the purchasers. It may be that this group carried on a major part of such speculative activity as did occur.

Summary of Situation. The number of farms sold is large and the price of farm land is rising rapidly. A substantial proportion of the purchasers are mortgaging the land they buy for three-fourths or more of its purchase price. The decline in interest rates which has taken place in recent years does not appear to have influenced the rate at which land values have been capitalized because the decline in rates of loans from private sources has been slight. Purchasers have been farmers, most of them farmers who already owned some land.

The difficulties which will arise if income derived from these farms in the future does not measure up to the expectations on which present prices are evidently based are apparent.

Agricultural Implications of Farm Land Values

The measure of the degree to which land prices are inflated is not achieved by a comparison with values in past years but depends on an estimate of future income from the land.

Any estimate, then, of the degree to which farm land prices vary from warranted values depends on assumptions concerning the various factors which may be expected to affect future land income and the interest rate at which it should be discounted. These items are estimates themselves.[6]

The primary factor in valuation of prospective incomes in the Southeastern Area is the price level of cotton. The importance of cotton as a source of income to farmers in the Southeast has been emphasized many times. It is hardly necessary to do more here than to mention that 67 percent of the value of farm products sold or traded from farms growing cotton in Alabama, Georgia, Mississippi and South Carolina was estimated to be from cotton or cottonseed in 1939.[7] These farms comprise 84 percent of the number of farms in these states. On these farms crops other than cotton accounted for 19 percent and live-

[6] For a fuller discussion see U. S. Department of Agriculture Circular 690, "The Farm Real Estate Situation, 1942-43."

[7] Unpublished data. Phillip E. Jones, "Needed Adjustments in the Cotton Economy of the Southeastern United States."

stock and livestock products for 13 percent of the total value of farm products sold or traded. The principal crops other than cotton were tobacco, peanuts, and truck crops. Since these are specialties grown in relatively small areas, they will not be considered in this analysis which will be based on alternative price and income situations for cotton.

In order to illustrate the levels at which land prices may be stabilized in the post-war years and the possible effect on purchasers of incurring debts based on present land prices, it will be necessary to estimate the incomes which might result from various price levels, yields, and costs of production for cotton. It is also necessary to make assumptions concerning the income from the acreage diverted from cotton since the 1935-39 base period. There are many crops which might be grown on the cropland not in cotton but the diverse problems presented by these alternatives are so numerous that no attempt has been made to present them in detail. It has been assumed instead that the acreage taken out of cotton would return as much, one-half as much, or one-fourth as much as if it were in cotton.

It should be understood that while one of the cotton prices assumed may describe fairly well the situation which will exist in a normal postwar year it is quite possible that none of them will fit the actual situation which will have developed by then. It is impossible to predict postwar land values.[8]

The four prices used for cotton are 21, 17, 11, and 9 cents a pound. These prices would tend to be accompanied by the following conditions: (a) *21 cents* . . . full industrial employment, a parity price for cotton, controlled production (about 7 million bales), no international trade in cotton. In short, the cotton policy would be one facet of an extremely nationalistic and self-sufficient economic policy. This assumption does not contemplate the reduction of domestic demand below 7 million bales owing to expansion of the production of competing fibers at a rate greater than the expansion of demand. It subsidizes the producer at the expense of the consumer. (b) *17 cents* . . . all of the conditions listed under (a) would prevail with the important exception that industrial employment would be only moderate. (c) *11 cents* . . . full industrial employment, a competitive world price for cotton, uncontrolled production of cotton (13 million bales), mechanization of cotton farms, production shifts to areas with the greatest economic advantage in growing cotton, a substantial foreign trade in cotton. (d) *9 cents* . . . conditions listed under (c) would prevail with the exceptions that there would be moderate industrial employment and cotton production would be likely to decrease slightly amounting to about 12 million bales.

It is assumed that the same proportion of farm income is capitalized into land values under each of the price situations cited as went to land during the period 1935-39, and that the interest rate at which capitalization takes place is the same as that in those years.[9] It is believed that cotton acreage will be smaller under these conditions than it was during the 1935-39 period. If this is true the income which may be expected from alternative uses of the cropland previously devoted to cotton is an important factor in our calculations. Three conditions have been hypothesized at each cotton

[8] See also "Post-War Farm Land Values," M. M. Regan, *and* Fred A. Clarenbach, *The Journal of Land & Public Utility Economics, August 1945.*

[9] This is probably an overstatement in the case of a full employment economy. See U. S. Department of Agriculture Circular 743, "The Farm Real Estate Situation, 1944-45."

price: (a) the land which was diverted from cotton—difference between assumed acreage and that grown during the years 1935-39—will return as large an income as it would if it were in cotton, (b) it will return one-half as much, and (c) it will return one-fourth as much. If a world price prevails the return from land diverted from cotton will not have much effect on farm values because cotton acreages will come close to equaling those of the base period. If, however, a parity price is maintained with cotton acreages averaging less than one-half of those in the 1935-39 base period. the level of income on the diverted lands becomes quite important. The least likely assumption is a combination of a parity price for cotton and a return from alternative uses as great as that from cotton. This is, however, the only assumption which would support a land value index as high as that in four of the Southeastern states in 1945 (Table 1).[10]

[10] The land value index in 1945 ranged from 196 in South Carolina to 142 in Florida (1935-39=100). Comparable figures for other states are: Alabama, 153; Georgia, 173; and Mississippi, 168.

TABLE I. FARM LAND VALUES WHICH WOULD BE JUSTIFIED IN THE SOUTHEAST UNDER STATED ASSUMPTIONS

Assumptions	Price of Cotton per Pound	Ratio to 1935 - 39 Price	Ratio to 1935 - 39 Cotton Acreage	Returns from Diverted Acreage[1]	Ratio to 1935 - 39 Income from Cotton[2]	Hypothetical Land Market Index
	Cents			*Percent*		
Base period (1935-39).....	10.34	100	100	.....	100	100
Full employment parity price.....	21	203	[3]42	100	203	203
				50	[4]144	144
				25	115	115
Full employment world price.....	11	106	[5]91	100	106	106
				50	101	101
				25	98	98
Moderate employment parity price.....	17	164	[3]42	100	164	164
				50	116	116
				25	93	93
Moderate employment world price.....	9	87	[6]84	100	87	87
				50	80	80
				25	76	76

[1] It is assumed that returns from the portion of the 1935–39 average cotton acreage which was not in cotton under any particular set of assumptions might be 100, 50, or 25 percent as much as they would if it were in cotton at the assumed prices of and yields for cotton.

[2] Return to acreage which was in cotton during 1935–39 as a proportion of the average return for those years.

[3] Controlled acreage of 12 million acres, 280 lbs. yield.

[4] This figure was arrived at by calculating the income from cotton under the assumptions given and adding the income from the acres which were in cotton from 1935 to 1939 but would not be in cotton under the assumptions. The income per acre from these acres was assumed to be 50 percent of the income from cotton at the given yields and prices. The computations involved were.:

$$\frac{203\ (.42)+203\ (1.00-.42)}{.50}=144$$

where 203 = the assumed price for cotton as a proportion of the 1935–39 price.
.42 = the proportion of the 1935–39 cotton acreage which would be in cotton.
1.00 − .42 = the proportion of the 1935–39 cotton acreage diverted to other crops.
.50 = the rate of return from the crops substituted for cotton as a proportion of the return which would have been received if this land had been in cotton at assumed prices and yields. The same method was used in computing other figures in this column.

[5] Uncontrolled acreage, 26 million acres, 250 lbs. yield.

[6] Uncontrolled acreage, 24 million acres, 250 lbs. yield.

A much more probable assumption (that, if parity prices for cotton were maintained, the returns from other uses of the land diverted from cotton would be one-fourth as great as if the land were in cotton at the parity price) would justify a land value index of 115 with full employment or 91 with moderate employment. If a world price for cotton prevailed, land values should be about the same as those of 1935-39 if there was full employment but only four-fifths as high if there was moderate employment.

Parity prices for cotton and comparable returns per acre from land diverted from cotton justify land values corresponding to those now indicated by the land value index while a world cotton price, even granted other favorable factors, will not support prices at anywhere near their present levels. If national economic and agricultural policies require that cotton be priced at the world level, adjustment of land values to a permanently lower base is almost inevitable. The easing of the burden of such adjustment must be an important sector of any transitional program which is undertaken. If this were not done, the hostility toward the program would be enormous as landowners realized that they were losing investment and equity values.

The cotton farmer has been maneuvered into a completely untenable position by prevalent agricultural programs and policies. If he is to meet interest and principal payments on his mortgage and receive a return on his land investment, he must get a parity price for cotton and comparably high prices for his other products. In the long run this program defeats itself because it causes further replacement of cotton by substitute fibers and stifles the export market. The farmer cannot expect to receive high prices for other products indefinitely because of the competition from other regions. The only escape open is a gradual shift to less intensive types of farming, accompanied by lower land prices. The impact of such a shift, as pointed out previously, should be mitigated. Liberal credit terms will not be a solution as they will not eliminate the overcapitalization which will be the real difficulty. A satisfactory cure may involve wholesale debt adjustment and the payment of direct grants to absorb the change in capital value of farm units.

The effect upon the individual purchaser can be clearly demonstrated. John Jones buys a 153-acre farm for $5,275 in the fall of 1944 and borrows $3,500 from a credit agency to finance the purchase (the figures given are 1944 averages for the 10 counties surveyed). This farm could have been bought for $3,178 during the 1935-39 base period. At that time it had 40 acres in cotton with an average production of 18 bales which grossed $930.[11] Average net costs per pound of lint (excluding rent) were 7.8 cents in the Southeastern states during these years; hence, the net returns would be $228. In 1944 the farm had 28 acres of cotton which made 16 bales grossing $1,700.[12] Net costs per pound of lint in 1942 (latest year for which figures are available) were 10.4 cents. At this cost level 16 bales would net $868 in 1944. The farm had increased 66 percent in value while the net returns from cotton had increased 281 percent, and the reduction in cotton acreage had made some diversification possible.

Twenty-four hundred dollars of the loan was payable in equal annual installments of principal for the next 20 years. Eleven hundred was payable in 10 years.

[11] Average yields and prices paid to farmers for cotton during 1935-39 are assumed.

[12] This is derived by reducing the 40 acres and increasing the yield in the same proportions as occurred for the nation.

Payments would vary from $381.00 the first year to $124.80 in the twentieth year.

The first payment would be 44 percent of the net value of the 1944 cotton crop. The fifth payment, in 1950, would be $329.50. What relation would it bear to his income at that time? Let us suppose a condition of moderate employment with a parity price level for cotton. Jones would raise 16.8 acres of cotton or about 4,700 pounds.[18] This would gross $799. If he grossed one-half as much per acre on the balance of the 40 acres that would be $552. If his costs were at the 1942 level, a reasonable assumption considering the price of cotton, costs for cotton would be $489. If the cost on the portion of the 40 acres not in cotton were one-half as great per acre they would be $338. The net return on the 40 acres would be $524 and the payment would be 63 percent of the net return of the product from the 40 acres.

What relation would this $329.50 bear to income from the 40 acres assuming full employment, a world price level for cotton, and a gross return from other crops equal to that received for cotton? Jones would raise 36.4 acres of cotton, making about 18 bales, which would gross $990. At 1942 costs this would net $54. The balance of the 40 acres would gross $99 and net $52 if costs were one-half as high per acre as for cotton. Net returns for the 40 acres would be $106 and the payments would be 311 percent of the net return from the 40 acres.

It is obvious that if any but the most optimistic assumptions are fulfilled Jones will be in very hot water. It should be noted that while these assumptions would be optimistic from the point of view of the short time interests of the individual cotton farmer they might prove to be contrary to the national interest in the larger framework of international trade, and to the desires of consumers in the United States.

If. nevertheless, John Jones feels that he must buy a farm now even though he does not have enough money to pay cash for it, his best alternative would be to secure a long-term loan but plan to pay it off within five years or less.

Present land values in the cotton-raising section of the Southeast are a severe handicap to the adoption of any program for a return to world price levels for cotton. Inflation has already gone far and the probability of a serious and painful deflation seems strong.

Farmers as producers wish for high prices for cotton and the other products of their labor or for low prices for land. If they incur land mortgage debts anticipating high prices, low prices will be disastrous. All consumers, including farmers, desire a low price level for the things they buy. The choice between a high price for farm products, which will penalize consumers, or a low price, which will bankrupt many farmers, must be an unhappy one.

If it appears that the general welfare would be promoted to the greatest degree through a readjustment of agricultural resources which would permit efficient production and a high level of farm income coupled with considerably lower land prices, it will be necessary to cushion the shock both to farmers and to investors in farm lands.

The problem of resolving this dilemma by promoting the consumption of farm products if high prices are maintained or mitigating the shock to producers if low prices prevail is the principal one confronting policy-makers at present.

[18] Assuming the same proportionate reductions in acreage and increases in yields given in table 1.

The Place of French-Speaking Farmers of Southern Louisiana in Future Land Development and Reclamation Projects

By ROBERT W. HARRISON* *and* WALTER M. KOLLMORGEN**

IT was reasonable to expect, as many a 19th century student did, that once the federal government became involved in land reclamation it would not confine its activities to providing additional agricultural products, but would couple this activity with the task of bettering the physical setting or economic situation of various geographic, ethnic, or social groups.[1] The expectation has been fully met. Witness the annual seesaw between eastern flood control and western irrigation interests for federal reclamation funds; the development of new lands by irrigation for the Spanish-Americans and other groups in the Southwest; the rural resettlement projects for the displaced; and the making of new farms for the poor by the Farm Security Administration.

In this setting hardly anyone will be surprised to hear the French-speaking farmers of southern Louisiana mentioned in connection with land development and land reclamation schemes which may be in prospect. All that is surprising is that they have not been mentioned more prominently before in this context. Their physical setting and economic condition would long ago have made them eligible subjects for land development and reclamation projects. An analysis of their chances for successfully settling new lands and grasping new opportunities in commercial agriculture, however, must take into consideration not only their physical but also their cultural relation to potential areas of new lands.

It is difficult to say anything about the Louisiana French farmer without stirring in the reader's mind the extravagant folklore which surrounds these people. As attractive and nostalgic as the romance is, we shall have to put it aside while we examine some of the less publicized and less attractive aspects in the situation of these farm people.

The French settlements in Louisiana occupy a triangular area in the southern part of the state.[2] The coast line of the Gulf of Mexico is the base of the triangle; a line running from the southwestern corner of the state to the junction of the Red and Mississippi Rivers is the left side; and a straight line from this junction of rivers to New Orleans and the Gulf forms the right side of the triangle. Within this area we find one of our country's oldest agricultural economies.

From their beginning in the 18th century, the French and Spanish settlements along the Mississippi River proper were intensely commercial. Indigo, rice, and sugar held successive places as the money

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[1] Jefferson, Calhoun, and Benjamin Harrison (to name only three) expressed this rather common expectation or fear. This more or less inevitable (though essentially faulty) coupling as it takes place under the American form of government would provide a field for investigation by some political scientist.

[2] See *The Population of Louisiana: Its Composition and Changes*, La. State Univ. Bul. No. 293, Nov. 1937, pp. 17-18.

crops of supreme importance to the Colonial planter. The modern sugar plantation is the counterpart of this early commercial agriculture. Along some of the bayous lying west of the Mississippi River, however, a pleasant subsistence economy sprang up, depending on some money crops, such as cane, but based chiefly on a day-to-day living obtained partly through hunting and fishing the adjacent streams and bayous. The arrival of the Acadians in particular swelled the ranks of these small operators who maintained themselves by these rather diverse activities. Today it is primarily the petit holders who give the area its peculiar characteristics of line settlements, intimate and rather stable community life, and, in places, the horse-and-buggy mode of travel.

Settled as they were on the narrow peninsular-like natural levees, built up a few feet above the swamp and tidal waters by the numerous bayous which enter the Gulf, these people soon found themselves crowded and in great need of additional land. The swamps afforded some opportunity for hunting and fishing and these occupations were fully plied, but agriculture was the main pursuit. Industry, even home industry of the intensive sort, was almost unknown. Accordingly, land prices rose and land divisions among family members long ago reached serious proportions. Today the bayou settlements of southern Louisiana are perhaps the most compact communities found in rural America. So narrow are the farms extending from the bayous back to the swamps that the lines of farm homes along the streams have the appearance of urban streets. It is for this reason that the typical settlements along Bayou Lafourche have been said to form the "longest main street in America." In this fashion live most of the 600,000 French-speaking people[3] who inhabit the triangle defined above.

Despite the early agricultural developments of these alluvial lands, it was only recently that an extensive system of modern roads was built in southern Louisiana to bridge the swamps and connect the long-isolated bayou settlements. Before the state roads were built, travel by boat provided whatever contact was made with the outside world. Thus for long years a high degree of physical isolation helped preserve and intensify the distinct linguistic and cultural characteristics of the rural people. Many of the 18th-century peasant proprietor traits that were perpetuated may be admirable and valuable, but the physical and social circumstances that led to their perpetuation also meant that these farmers were by-passed by many of the innovations and developments in modern agriculture.

While isolation prevailed, the circular subsistence economy was probably held to be a reasonable solution to life's problems. At least it was the accustomed solution. In the last 30 years, however, and especially in the last 10 years, this life pattern has seemed less satisfactory to many, and other solutions have at least seemed possible. Contact with cities (New Orleans, Baton Rouge, Alexandria, Port Arthur, and Houston) has become more frequent. Modern high schools have been established (sometimes with imported teachers). The sympathetic interest of the state and federal Governments has been discovered — a zone where distrust, or worse, on the part of the petit French farmer had formerly prevailed.[4] The combined in-

[3] Somewhat less than 50 percent of Louisiana's white population.

[4] Students of Louisiana history seem to agree that the Huey Long administration was the first in Louisiana's long history to recognize in practical ways the aspirations of the small French proprietors in the southern

(*Footnote 4 continued on page 225*)

fluences of these important developments are slowly beginning to find expression among the French-speaking farmers as they search for more modern forms of agriculture, greater cash incomes, and thereby standards of living more nearly like those of farm owners elsewhere and of city dwellers.

Quite naturally, the prospects of developing new land or in some way expanding the agricultural plant so that the youth (many just returning from the war) will have a place in which to live and work is rapidly becoming a primary concern of every rural family of French-speaking Louisiana. For the last 100 years, youth have been reluctantly migrating from the farms of southern Louisiana to nearby cities, where they became day laborers or domestics, and occasionally skilled or professional workers. Those who remained on the farms strove to make them larger by draining some of the land along the edge of the swamps or by building a "back" levee to keep out the tide waters. But for the most part this was likely to make only minute quantities of new land available. Only with the breakdown of some of the old physical and social isolation and the coming of new and primarily large-scale technology applicable to land reclamation has there seemed any chance for appreciably expanding the local land base or developing nearby marshlands.

The mention of new land development in French-speaking Louisiana usually brings to mind drainage reclamation projects in the extensive marshlands which border the Gulf and intrude many miles inland in the interstream areas behind the natural levee banks of the major bayous and rivers.[5] There are also large blocks of undeveloped alluvial land in the northeastern part of the state in the valleys of the Mississippi and Ouachita Rivers. These two general localities contain the last undeveloped land within a reasonable distance of the line settlements. The coastal prairies in southwestern Louisiana have been settled during the last half century by grain and stock farmers from the Corn Belt and Great Plains. Similarly, much available land east of the Mississippi River in southern Louisiana, Mississippi, and Alabama has been settled (also rather recently) by immigrants from the North Central States and Europe.[6]

Of the two undeveloped areas, the French-speaking farmers are much better acquainted with the marshlands than with the alluvial areas above the Red River in northeast Louisiana. They have hunted and fished throughout the marshes and many have relatives or neighbors who make a living there as professional trappers, or who ply other phases of the collecting economy of the marshlands. Of the forested alluvial bottoms of northeast Louisiana they know almost nothing and manifest little interest in them as sites for active settlement.

The marshlands, if they can be economically reclaimed, are ideally located for settlement by the French-speaking farmers of southern Louisiana. The presence of these extensive marshes so near the Gulf cities and the crowded bayou settlements has, during every period of prosperity for the last hundred years, led to suggestions that they be reclaimed and used for producing vegetables and

(*Footnote 4 continued from page 224*)

part of the state. Long's handling of these people unquestionably started a revolution in southern Louisiana, a revolution which is not yet in full momentum, or anywhere fully understood.

[5] No reliable figure of the marshland suitable for reclaiming is available. Various agencies interested in reclamation have mentioned figures ranging from 200,000 to several million acres.

[6] See Walter M. Kollmorgen, "Immigrant Settlements in Southern Agriculture: A Commentary on the Significance of Cultural Islands in Agricultural History," *Agricultural History*, April 1945, pp. 69-78.

other intensive crops. From time to time reclamation attempts by private capitalists were actually made. Rarely did the promoters of these projects have in mind large-scale settlements of the French-speaking farmers; rather, colonies of immigrants from the Lake States and Corn Belt were planned. When these failed, plantation-like operations were undertaken using local labor for the unskilled work and importing skilled workers from other sections of the country where they had become familiar with specialized crops. Of the private developments—some 30 projects were undertaken from 1907 to 1920—all but two or three proved miserable failures and are now covered by marsh and tidal waters. The surviving projects have required frequent and heavy subsidies. For the most part private reclamation for this area is considered unfeasible. The chief reason given for this is that private capital is rarely strong enough to finance and manage so vast a project as would be required to reclaim the marshes of Louisiana successfully. Since a sea-wall to protect reclamation projects from Gulf storms and tidal waves would probably be required, there is little doubt that government assistance would be necessary should a full-scale reclamation be attempted.

With private development more or less ruled out by the nature of the marshland reclamation job, the federal government is looked to as the only agency sufficiently powerful to perform the task. As early as 1907 or 1908 there was serious discussion of government reclamation projects for this area. In 1915 and 1916, a time of enthusiastic development in the marshlands, it was almost universally assumed that large, government-sponsored reclamations would follow successful private demonstrations. The Bureau of Reclamation of the Department of the Interior was frequently mentioned as the logical agency for the job. The failure of most private marshland projects and the agricultural depression of the 1920's cooled public interest in these lands. Currently there is a strong revival of this old interest. Again the Bureau of Reclamation is believed by many to be a suitable agency for handling the job.[7] Several reclamation associations composed of influential citizens have been formed in Louisiana for promoting Congressional and local interest in land reclamation, particularly in the development of the marshlands of the state.

Since the federal government has already spent many millions of dollars on flood-control projects in the lower Mississippi Valley, it seems logical to many people that it should take the next step and reclaim undeveloped alluvial and marshlands through drainage, even though such reclamation of marshlands would probably require an expensive sea-wall along part of the Gulf coast to prevent damage from storms and high tides. The fact that the French-speaking farmers need additional land is presented as a further justification for such a project. Frequently, however, reference to the petit French holders and their problem is an afterthought rather than the guiding motive for discussing reclamation. The immediate purpose of the promoters is to get large engineering and real estate schemes started.

Despite lack of interest of certain land promoters in the French-speaking farmers, it may well be that if the federal government should undertake marshland reclamation it would be at least partly on the basis of aid to this de-

[7] In the last session of Congress a bill (S. 440) was introduced which would change the official territory of the Bureau of Reclamation, making it possible for that Bureau to work in Louisiana and other states in the humid zone.

pressed agricultural group. The French-speaking farmers now have little legal claim to the marshlands, many, perhaps most, of which are owned by syndicates or corporations which derive their income from the lease of trapping rights.[8] The important question is how suitable the marshlands are as potential farm sites for the French-speaking farmers and for others who might qualify for government assistance.[9]

Admittedly the marshlands are ideally located for development and use by the French-speaking farmers. Economically, however, the present marsh trapper would suffer from in-coming farmers if such a reclamation were carried out. It must be remembered, too, that reclamation of the marshlands for farming would be extremely costly and would involve more complexities and problems than is generally realized. These relate to such various factors as earth compaction and associated physical alterations in soil-forming materials, the adoption of adequate income-producing crops, the suitability of the settlers to produce intensive crops, the provision of drainage ditches and adequate pumping facilities, and, last but not least, the building of an adequate dike to provide reasonable security against recurring tropical storms.

Although the hazard of tropical storms presents one of the most serious problems to marshland reclamation, it has received almost no attention by advocates of this program. Promotional literature on this subject points again and again to similar reclamations on the extensive lowland in eastern England and northern Holland. Only delay and hesitancy are said to account for the absence of similar developments in southern Louisiana. No mention is made of the fact that Louisiana lies in the path of destructive tropical storms which may prove hazardous to inhabitants living behind any but the most substantial dikes. This danger is well illustrated by the storm flood experienced in southern Louisiana in 1940 when heavy interior rains in combination with invading Gulf waters converted the whole coastal area into an inland sea, and even the city of Crowley, about 50 miles from the Gulf, was covered by 4 to 6 feet of water.

In the alluvial valley west of the Mississippi River between the Arkansas and Red Rivers are vast tracts of forested and cutover land which many agricultural experts believe will be particularly suited for farming once they are adequately drained and cleared. To perfect drainage will require heavy public outlays. Local organization and management of drainage affairs has proved inadequate so far as making new land available is concerned. Reclamation cost will be high, though on a per-acre basis the hardwood alluvial areas can be reclaimed much more cheaply than the marshland. The technical problems of reclaiming the non-marshlands of the alluvial valley are fairly well known, although no adequate cost studies of the reclamation operation are as yet available. Needless to say, much is still to be learned about farming the alluvial soils, particularly the "buckshot" soils so common in the inter-stream areas of Louisiana. The experience of Farm Security Administration resettlement projects in areas of such soils has not been very promising.

Although the alluvial valley north of

[8] There is an interesting story connected with the manner in which the coastal marshlands passed from a status of a more or less free trapping ground into the hands of capital interests (largely located in New Orleans).

[9] It is reasonable to assume that qualifications for settlement on government-sponsored marshland projects would involve certain elements of need, as on Farm Security Administration projects, and that size of holdings would be regulated, as in Western irrigation projects managed by the Bureau of Reclamation.

the Red River is geographically but a short distance from the crowded settlements of the French-speaking farmers, culturally it is remote. North of the Red River a non-Catholic, Puritan tradition prevails, many features of which stand in strong contrast to the intensely Catholic and largely non-Puritan folkways of the French-speaking farmer. This cultural difference between north and south Louisiana has many political ramifications, and a long history of social friction and political distrust divides the two groups. Cultural differences would clearly make movement to new-ground areas north of the Red River very difficult for the French-speaking farmers, particularly if they settled on more or less scattered farms, the accepted type of settlement in this area. As students of land settlement well know, such considerations can be vital factors in the success or failure of large-scale settlement programs.

Lumber companies and plantation interests hold the bulk of the undeveloped alluvial lands in northeast Louisiana and southeast Arkansas. The French-speaking farmers have no financial stake in the area at present. The present owners expect handsome profits through increased land values following government flood-control and drainage programs. Public law 534 of the 78th Congress, second session, gives the U. S. Army Engineers the right to do drainage work on major streams.[10] A comprehensive program of enlarging river beds is now under way in the Beouf-Tensas Basin. Additional flood-control and drainage work is certain to follow.

There is no doubt that agricultural land in southeast Arkansas and northeast Louisiana can be expanded, but there is yet no agreement on who should develop and occupy such land, and what part, if any, the federal government would have in deciding these problems. The investment of millions of dollars of federal funds in flood-control and drainage works in this area clearly makes future land development here a matter of deep public concern. What place, or claim, the French-speaking farmers will have on new lands in this area will depend in large part on decisions concerning the possibility of their successfully settling and farming the potential land in this more northern area.

Assuming that land reclamation projects in one or both of the potential locations can be successfully worked out in physical detail, what are the possibilities of their successful settlement and operation by the French-speaking farmers? These people have developed a remarkable place-and-folk attachment to the lands they now occupy, and this attachment in turn has been a major factor in conditioning their economy. Most of the land which the French-speaking farmers hold was fully developed by the middle of the 19th century. Since that time there has been a serious pyramiding of people on available land. There are few instances of new land development or migration to other agricultural areas in spite of the fact that much of this pyramiding of rural population took place at a time when vast tracts of new land were being developed to the east, north, and west of the French. The French-speaking farmers of Louisiana took almost no part in the great Westward expansion of agriculture in the 20th century, though admittedly they were in need of additional lands.[11]

[10] Section 2 of this law reads: ". . . the words 'flood control' as used in section 1 of the act of June 22, 1936, shall be construed to include channel and major drainage improvements."

[11] Over 100 years ago, de Tocqueville, in his comments on the frontier and American individualism, made

(*Footnote 11 continued on page 229*)

Not only did the French-speaking farmers fail to participate in the great Westward expansion, they also neglected to take advantage of opportunities of developing new land in nearby parts of Louisiana. In the last 50 years, thousands of acres of unfarmed prairie land immediately adjacent to the lands occupied by the Louisiana French-speaking farmers have been converted to prosperous rice-producing areas by Great Plains and Corn Belt farmers. This phenomenal land development benefited the French-speaking farmers very little. Nor did they participate in the development of new lands in the neighboring counties east of the Mississippi River, where several prosperous immigrant settlements have been made in recent decades.

An interesting aspect in the failure of the crowded French-speaking farmer to pioneer in Louisiana land development is the attitude of the state government. Few states have carried on such persistent land promotion and land settlement programs as has Louisiana. Since Reconstruction days persistent efforts have been made to draw settlers to the available land, but there was no serious attempt to stimulate the interest of French-speaking farmers in a program of relocation or expansion. The appeal has been almost entirely to out-of-state people. The voluminous literature put out by railroads, real estate syndicates, and chambers of commerce in their efforts to develop new lands and new crops is in no way addressed to the French-speaking people as potential land settlers. Apparently, in Louisiana there has been little public confidence in the ability of the French-speaking farmer to pioneer in new farming areas.[12]

The foregoing may leave the impression that the French-speaking people have not migrated or made any adjustments to the growing pressure of population on the land base. This, of course, is incorrect. They have made numerous adjustments. Migration of rural youth from the bayou settlements to Baton Rouge, New Orleans, and Alexandria, and even to the Texas port cities, has been heavy in recent decades. While the movement has been largely circumscribed by near-by cities, it has been of great importance in lessening the direct pressure on rural resources. These local migrations of 50 to 100 miles, however, stand in sharp contrast to the long trek made so often by the southern Negro seeking work in northern cities, or of the Okies in their search for economic security on the west coast. Rather than seek new agricultural frontiers, the rural youth of French Louisiana have turned to employment in the coastal cities and villages. Usually their lot has been hard and their station low; for in most in-

(*Footnote 11 continued from page 228*)

the following shrewd observation which is particularly pertinent here: "I have met with men in New England who were on the point of leaving a country where they might have remained in easy circumstances, to seek their fortune in the wilds. Not far from that region I found a French population in Canada, closely crowded on a narrow territory, although the same wilds were at hand; and while the emigrant from the United States purchased an extensive estate with the earnings of a short term of labor, the Canadian paid as much for land as he would have done in France. Thus Nature offers the solitudes of the new world to Europeans also; but they do not always know how to make use of her gifts. Other inhabitants of America have the same physical conditions of prosperity as the Anglo-Americans, but without their laws and their customs; and these people are miserable." Alexis de Tocqueville, *Democracy in America,* new edition prepared by Phillips Bradley (1945), Vol. I, p. 320.

[12] A great wealth of settlement—promotion literature on Louisiana lands—as well as lands in other states—awaits the enterprising research worker in the fields of agriculture, history, and geography. The office of the Commissioner of Agriculture (Louisiana) has prepared and released scores of publications describing in glowing manner the agricultural opportunities awaiting immigrants from other states and foreign countries. Some of these publications were translated into as many as six and seven languages. During the closing decades of the 19th century and the first decade of the present century, literature promoting immigration was also circulated on a large scale by railroad companies, particularly the Southern Pacific, the Missouri Pacific, and the Illinois Central. Land companies, newspapers, and associations of various kinds were also very active in this field.

stances their education was limited and few possessed special skills. Unskilled labor and domestic service were about the best they could hope for.

The reluctance of French-speaking people to migrate or to pioneer in new land areas is, of course, a direct outgrowth of their culture complex. The solidarity of the group is not often willingly violated. Those who have gone to the near-by cities have formed their own social circles, and they return frequently to the family homestead. The authors were told that it is a common occurrence for youths studying for the priesthood to return home out of homesickness, unable to complete the semester. Countless other examples of pronounced group cohesion could be cited. The cleavage between the Catholics of southern Louisiana and the Protestants of northern Louisiana—so well high-lighted in the political history of the state—has doubtless intensified this feeling.

Recognizing these characteristics of the French-speaking farmers, it is easy to understand why they have not been sponsored as suitable "new-ground" settlers. Many land developers familiar with marshland projects interviewed by the authors expressed grave doubt of the suitability of French-speaking farmers for settlement on lands reclaimed at high cost. It is clear from land-promotion literature that most agencies share this view. Among the reasons locally given are lack of experience, managerial ability, capital, and efficient work habits among the French-speaking farmers.

The fundamental conclusion to be drawn from this situation is that if the marshland or the Mississippi Valley alluvial lands to the north are to be developed for successful agriculture and be occupied by the French farmer, the administrators and managers of the reclamation must be prepared to engage in an intensive and sustained farmer-training program. Obviously, this would be an expensive part of the entire settlement plan. Judging by past experience it could easily equal the cost of physical land development for settlement. Settlers would have to be schooled in the use of new machines and the technique of growing unfamiliar crops. Perhaps they would have to be organized into marketing groups. Numerous strictly social problems would inevitably arise and the French-speaking farmers would have to make many painful adjustments even under the most carefully planned conditions.

Considering the present high level of production of agriculture and the great need of labor in non-agricultural fields, it is quite possible that the French-speaking farmers should not be encouraged toward newly developed agricultural pursuits, but rather trained for non-agricultural employment. This line of action has much to recommend it since the spontaneous migration of these people has been towards the village or city rather than to rural areas, even at a time when rural areas were readily accessible. Further, there is considerable evidence to show that it is less costly to train rural youth for nonfarm employment than for life in a different kind of agriculture. Apparently in the factory or shop situation there is much less chance for folkways to linger and to obstruct adjustment to new work and new manners of living.

New land for French-speaking farmers of southern Louisiana is, therefore, a question of the greatest complexity. Planners should proceed slowly, particularly where and when easy solutions are offered and seem possible. Had there been any easy answer to the century-old problem of this group, it would have

been discovered long ago. Moreover, there are many everyday economic and social situations in south Louisiana which appear to planners and administrators as intolerable (and not acceptable according to their preconceived standards of rural welfare), but which are not considered problems at all by local residents. Obviously, the French Catholic communities of south Louisiana are willing to sacrifice many elements in the standard of living in order to perpetuate situations and values which they cherish. Since this is the case, programs, particularly government-sponsored programs, designed to bring these people into contact with different and perhaps more complex commercial agriculture are probably premature. At least half of a job designed toward equalized living standards must be done spontaneously by the individuals and groups affected.

Rural Land-Use Legislation in the States: the War Years†

By HERMAN WALKER, JR.*

THIS four-year cycle, 1942-45, covers all state legislative sessions during the period of war. One might have supposed that, preoccupied with the grave tribulations and colossal demands of this war, the legislatures would have shown little disposition to consider land-use legislation. But actually the legislatures gave quite as much constructive attention to land-use affairs, at least, as they did in any period of equal length in the years before Pearl Harbor.

Whether this gratifying phenomenon was despite or because of the war cannot be said. Indeed it would be interesting to speculate about the explanation. It must suffice here merely to take note; and to venture the hope that it augurs well for the future.

Soil Conservation

Soil conservation is a good enough point at which to begin a review of the land-use legislation of the last four years. It has become obvious by now that the soil conservation district idea, although grown with great rapidity since the time it sprouted in 1937, is no hothouse plant. Soil conservation district enabling acts have apparently become firmly established — a permanent feature, one may infer, of the agricultural scene. But, needless to say, their status is not entirely static, for the legislatures are continually reviewing the needs and workings of soil conservation.

First of all, it is to be noted that the last six states without soil conservation legislation when we entered the war have joined the procession, so that a soil conservation law map of the United States will not now show a single complete blank. Four of the six (Delaware, Rhode Island, Massachusetts, and Missouri) generally followed the Standard Act, minus its land-use regulation features.[1] The fifth, New Hampshire, adopted the novel procedure of creating a single "soil conservation district" to blanket the whole state,[2] perhaps at the instance of a special erosion survey committee earlier created (by ch. 241 of 1943). The sixth, Connecticut, ignoring the Standard Act entirely, enacted a short law of its own devising, to be carried out by the commissioner of agriculture with the advice and assistance of a State Soil Conservation Advisory Committee.[3]

A second trend of note has been the increasing role on the State Committees

† For a more detailed and complete digest, see: the annual Summaries of *Outstanding Federal and State Legislation Affecting Rural Land Use* for 1942, 1943-44 and 1945, *Bulletins* L.E. 68, 69, and 70, respectively (USDA), Washington, D. C.

* Bureau of Agricultural Economics, Washington, D. C. Views expressed herein are personal.

[1] Delaware, ch. 212, Laws 1943; Rhode Island, ch. 1338, Laws 1943; Missouri, S. 80, p. 839-48, Laws 1943; Massachusetts, ch. 531 Laws 1945. At the same time Indiana has repealed the provisions of its Act providing for the adoption and enforcement of land-use regulations (ch. 331 Acts 1945); and New Mexico made the application of land-use regulations contingent on the consent of 50 percent of the landowners affected (ch. 130 of 1943). Colorado, the only state where soil conservation land-use ordinances have been widely adopted, revised the adoption procedure so as to require 75 percent in place of majority consent; and further stipulated that all existing ordinances would be nullified unless readopted within 45 days (ch. 229, Laws 1945). But this same law put more implementation into the ordinances by requiring the county attorney to prosecute violators.

[2] Ch. 151, Laws 1945. It is understood that, administratively, this arrangement is being applied so as to attain much the same operational result as the Standard Act, through the formation of sub-districts with farmer participation.

[3] Ch. 218, Acts 1945. The sum of $10,000 was appropriated to finance the inauguration of the policy. For administrative purposes, it is planned to organize the state into sub-areas in order to achieve decentralization and effective farmer participation.

given to "practical farmers," especially those experienced in soil conservation district affairs, as compared with technicians and ex-officio personages. Oklahoma, for example, entirely replaced its original ex-officio State Committee with a State Soil Conservation Board of 5 citizen farmers who are soil conservation district supervisors; and transferred its headquarters from the A. & M. college campus to the state capitol.[4] New York, similarly, in reconstituting its central committee, limited the vote to 5 farmer members; and Michigan's new committee gives the practical farmers majority control, by adding 4 of them to the 3 ex-officio members already provided.[5] Pennsylvania, California, and Georgia also prescribed the addition of farmers to the state committees, to the number of 3, 2, and 2, respectively.[6] In the case of the latter, these additions must be chosen from the ranks of the Board of Directors of the Georgia Association of Soil Conservation District supervisors.

As a companion piece, Oklahoma created a Division of Soil Conservation in the State Highway Commission, to act as construction agent for projects approved by soil conservation districts, and generally to have administration of laws and regulations pertaining to soil conservation.[7] Arkansas transferred the functions of its old Soil Conservation Committee to the Division of Flood Control, Water and Soil Conservation in the new Resources and Development Commission; and Arizona transferred to a State Soil Conservation Commissioner, in the State Land Department, all the powers and duties formerly vested in the State Soil Conservation Committee.[8]

A number of states also amended their law in the interests of operational flexibility, or to facilitate organization. Arkansas, Maryland, Minnesota, North Dakota, and Vermont, for example, attended to procedures for consolidation, division, or enlargement of established districts.[9] Again, Oregon, Illinois, Kansas and Colorado variously mollified the assent required in some step involved in the formation of new districts.[10] Michigan, furthermore, as well as providing for boundary changes, extended to "occupiers" (formerly, only "owners") the right to participate in referenda; and Ohio deleted a requirement that a referendum for district dissolution must be held once every three years.[11]

On the other hand, Indiana raised its referendum requirements from a mere majority to 60 percent, as well as restricted the franchise to "owners."[12] California discouraged the formation of any district when over 5 percent of its proposed area would not be benefited; and Wyoming granted to individual owners the right to withdraw from a district.[13] Pennsylvania revised its law so as to put more emphasis on the county as an area of operation, and Michigan forbade petitions for the formation of a district to

[4] S.B. 78 (Tit. 2, ch. 804), S.L. 1945, approved April 28, 1945.

[5] New York, ch. 883, Laws 1945; Michigan, No. 280, Public Acts 1945.

[6] Georgia, Act 222, p. 190, Acts 1945; Pennsylvania, Act 217, Acts 1945; California, Assembly Bill No. 1047, approved July 7, 1945.

[7] S.B. 149 (Tit. 69, ch. 1-B), S.L. 1945. Another act embodying Oklahoma's deep interest in soil conservation imposes on the Highway Commission and the county boards the duty of carrying out erosion control measures along public roads, under rules and regulations prepared by the state highway engineer; the cost to be included as a part of regular highway maintenance. S. 199, Tit. 99, ch. 5-A, S.L. 1945.

[8] Arkansas, Act 138 of 1945; Arizona, ch. 31, Laws 1945.

[9] Arkansas, Act 225 of 1945; Maryland, ch. 444, Laws 1943; Minnesota, ch. 274, Laws 1943; Vermont, No. 201 of 1945; North Dakota, ch. 42, Laws 1945; Minnesota, ch. 95, Laws 1945.

[10] Oregon, ch. 348, Laws 1945; Illinois, H. 521, p. 14, Laws 1943; Kansas, ch. 4, Laws 1945; Colorado, ch. 229, Laws 1945.

[11] Michigan, No. 280, Public Acts 1945; Ohio, H. 234, G.C. sec. 375-20.

[12] Ch. 331, Acts 1945.

[13] California, ch. 900, Stats. 1943; Wyoming, ch. 6, Laws 1945.

include land in more than one county; but Illinois did just the opposite.[14]

Finally, there seems to be a tendency toward greater financial support on the part of states and localities. Oklahoma took a lead, first, by creating a revolving fund, initially supplied with a $300,000 appropriation, to finance the purchase and operation of needed soil conservation equipment;[15] and second, by granting an appropriation of $180,000 to the State Soil Conservation Board for the 1945-47 biennium.[16] Louisiana likewise proved itself no laggard, by appropriating $194,000 for the 1944-46 biennium.[17] These are two outstanding examples; but there are also lesser instances of a state's willingness to share in underwriting the public's contribution to attaining soil conservation. To name but three examples, Virginia appropriated $70,000 for 1944-46; Oregon authorized its counties to employ an assistant county agricultural agent for soil conservation district activities; and Maryland authorized its counties to render monetary aid to soil conservation districts.[18]

Subsurface Development

In the regulation of strip mining, a relative of soil conservation, West Virginia produced the outstanding measure of the 1942-45 legislative cycle. This act[19] amplifies and strengthens a strip mining control policy already enunciated in 1939. Because the West Virginia law represents a determined effort to deal effectively with a problem besetting several areas of the country, it is worth summarizing in detail. At the outset, it forbids anyone to engage in strip mining of coal until after securing a permit from the state Department of Mines. The permittee, before he may proceed with stripping operations, must pay a registration fee of $50 and give a performance bond in the sum of $1,000 plus $500 for each acre (or fraction thereof) over 2 acres.

The performance obligations include proper drainage measures, re-covering the face of the coal, sealing breakthroughs, removal of refuse, regrading and refilling, and the planting of trees and other cover. Regrading and planting operations must be as prescribed by the Department of Mines and the Agricultural Experiment Station. The regrading requirement may, however, be waived by the Department, if the land involved was non-farm land and the Agricultural Experiment Station deems it inadaptable to agricultural or grazing use. Defaults in performance entail cancellation of all permits, ineligibility to future permits (until compliance is had), and forfeiture of the performance bond. Moneys realized from bond forfeitures go into a special fund, earmarked for use in reclaiming and rehabilitating lands henceforth injured by strip mining. Violations of the act are punishable by fine and imprisonment.

Pennsylvania, after an impressive experience with securing voluntary cooperation over the past two decades,[20] likewise adopted a compulsory measure to correct land destruction by open pit mining. In its case, performance bond to assure reparation of the wrecked surface

[14] Pennsylvania, Act 217, Acts 1945; Michigan No. 280, Public Acts 1945; Illinois, H. 521, p. 14, Laws 1943.

[15] S.B. 149 (Tit. 69, ch. 1-B), S.L. 1945. Virginia conferred authority on its State Committee to purchase soil conservation equipment and rent it out to counties or individuals (ch. 244, Acts 1944).

[16] S.B. 178, approved May 7, 1945.

[17] Act 87 of 1944.

[18] Oregon, ch. 221, Laws 1945; Maryland, ch. 819, Laws 1945. California repealed the authority for *special* levies by counties to finance soil conservation districts (ch. 66, Stats. 1943); but did not disturb the authorized 2-mill regular assessment (see ch. 423, Stats. 1945). Only a very fragmentary account of soil conservation finances is given in this article. For a state-by-state table, see pp. 1006-07 of the House Appropriations Sub-Committee Hearings on the 1947 Agriculture Appropriation Bill.

[19] Ch. 85, Laws 1945.

[20] See dispatch in *N. Y. Times*, March 10, 1946.

was set at $200 per acre.[21] Ohio created a 9-man commission to study the strip-mining problem, and allowed $20,000 to finance the project, which is to eventuate in legislative recommendations.[22]

Turning now to liquid mineral resources, the expected opening of oil fields in states heretofore innocent of oil production was anticipated by 1945 legislation in Alabama, Florida, North Carolina, and Georgia. Profiting from experience elsewhere, these states have sought to be prepared with a modern and comprehensive state control apparatus, designed to guide exploitation along orderly, conservational and efficient channels.[23] As a companion measure, Florida and Georgia also legislated at length on the granting of oil and gas leases to state lands, with limitations of 10,000 acres per lease in Florida and 6,000 in Georgia.[24] In addition, the former ratified the Interstate Oil and Gas Compact;[25] and the latter modified its law limiting land ownership by foreign corporations, so as to exempt them from the 5,000-acre limitation insofar as mineral leases are concerned.[26]

A number of other state legislatures also devoted attention to the leasing of public lands for oil and gas purposes, notably Nebraska.[27] This state, in separate enactments, dealt with state and local lands in general and with the Board of Education lands in particular. In the latter (a revision of previous law) there are special stipulations to protect the rights of surface lessees, by safeguarding their water rights, requiring compensation for damage to crops and so on, and by restricting drillers to the use only of such surface as is necessary to egress and to drilling operations.

New provisions for unitization or pooling of development and production reflect a healthy trend in the evolution of laws governing the lease of state lands. The purpose, of course, is to secure cooperative or joint exploitation on the part of two or more lessees overlying the same pool, whether or not all the surface belongs to the state, so as to avoid a wasteful competition in draining out the oil or gas. New Mexico's law on the subject is perhaps the most detailed of those enacted during 1942-45.[28] It sets forth the various practices contemplated and the limitations circumscribing the making of unitized arrangements; and, to encourage progress, provides that no requirement for a minimum rental is to be applicable to leases incorporating a unitized plan.

As part of its thorough-going approach, Florida adopted an outright severance-tax method for taxing oil and gas.[29] The

[21] Act 418, Acts 1945. It is reported that this law is being contested in the courts, on the ground that it is discriminatory, in that it applies to bituminous operators but not to the anthracite.

[22] S.B. 344, effective October 10, 1945.

[23] Alabama, H.B. 46, approved May 22, 1945; Florida, ch. 22819 (No. 305), Laws 1945; Georgia, Act 366, p. 366, Laws 1945; North Carolina, S.B. 231, ratified March 17, 1945.

[24] Ch. 22824 (No. 310), Florida Laws 1945; Act 359, p. 352, Georgia Acts 1945.

[25] Ch. 22823 (No. 309), Florida Laws 1945. Likewise Kentucky, ch. 267, Laws 1942; Montana, ch. 121, Laws 1945; and West Virginia, H.C.R. 20, adopted March 8, 1945. Extensions in Kansas (ch. 211 of 1943) and Illinois (S. 240, p. 952, Laws of 1943).

[26] Act 160, p. 152, Georgia Acts 1945.

[27] Ch. 163, and ch. 164, Laws 1943. Also on leasing of public lands for oil and gas or other mineral purposes: ch. 268, Kansas Laws of 1943; ch. 794, New York Laws 1945; ch. 529 and ch. 818, California Stats. 1945; ch. 150 and ch. 241, Mississippi Laws 1942; ch. 313, Kansas Laws 1945; H. 338, Tit. 64, ch. 8, Oklahoma S.L. of 1943; H. 169, Tit. 70, ch. 33a, Oklahoma S.L. 1945; ch. 272, Delaware Laws 1945; Minnesota, ch. 287, Laws 1943; and Alabama, S.B. 45, approved July 9, 1945. See also, ch. 215, Indiana Acts 1945.

[28] Ch. 88, Laws 1943. Also: Arkansas, Act 285 of 1943: Florida, ch. 22824 (No. 310), Laws 1945; Montana (tax-forfeited land), ch. 48, Laws 1945; Wyoming (farm loan board lands), ch. 143, Laws 1945; Utah, ch. 127, Laws 1945; and, for gas, Texas, ch. 309, S.L. 1945. Oklahoma's legislature provided for the unitizing of production in any area of common supply (on private lands), upon petition to the Corporation Commission of 50 percent or more of the lessees concerned. Provisions for forcible unitization on private property are, of course, among the modern features incorporated in the above-cited regulatory enactments of Florida, Georgia, Alabama, and North Carolina.

[29] Ch. 22784 (No. 270), Laws 1945.

rate is set at 5 percent on all commercial production, and is in lieu of all excise taxes, and of all ad valorem property taxes on subsurface oil and gas resources. In reciting the reason for the last-mentioned, the law mentions the infeasibility of attempting to assess the value of unseen natural wealth underground. Distribution of the tax is to be 80 percent to the state, and 20 percent to the county of origin. An interesting feature is the provision that, for ordinary property tax enforcement purposes, the subsurface is to be counted a part of the surface ownership, notwithstanding any separation of the fee. But the subsurface owner is given a special right to protect his interests by paying up any delinquent property taxes levied against the surface and acquiring thereby the tax certificate.

A 4-percent oil severance tax, in lieu of the ad valorem property tax, was likewise adopted by Alabama.[30] Mississippi gave evidence of the problems encountered in refraining from adopting the method chosen by Alabama and Florida. In counties where oil is produced in material quantities, extra compensation for the tax assessor was allowed, as well as $2,000 per year for the hire of additional help.[31]

Forestry

Although the improvement of fire protection bulked largest, as always, in legislative ministrations to the needs of forestry,[32] continued progress was recorded in other aspects of the subject. West Virginia will carry, on its 1946 ballot, a proposed "Forestry Amendment" to its constitution, empowering the legislature to classify forest lands, to contract with owners for forest management, and to apply differential methods of taxation to forests or to exempt them entirely from taxation.[33] Minnesota broadened its special method of taxing auxiliary forests and wood-lots by reducing the minimum eligible tract, respectively, to 35 acres (from 160) and to 5 acres (from 20), as well as by eliminating value limitations for auxiliary forests.[34]

A striking piece of forestry legislation of the period is the detailed Forest Conservancy Districts Act, passed by the 1943 session of the Maryland General Assembly.[35] In this, Maryland provided itself with a broad declaration of the public interest in forest conservation and development and fashioned an organization to give effect to a forestry policy. Under the Department and Commission of State Forests and Parks, the state is to be divided into districts, each under an appointive board. This organization, joined with the individual state forestry personnel, is given a wide range of powers and duties to promote scientific forestry and to determine practices conducive to forest conservation. The avowed objective is to secure proper forestry wherever possible under private ownership, with the assistance and guidance of the state; but to follow a program of public acquisition, as funds are available, wherever private ownership fails to serve the public interest.

Attention was given likewise by six other states to cutting practices, in the interests of timber conservation and regen-

[30] H.B. 2, approved May 19, 1945. Distribution of the proceeds of this tax is variable, with the state taking 50 percent of the first $150,000 annually, and 84 percent of all over that.

[31] Ch. 214, Laws 1942. Texas, for its part, abolished the severance tax on marble, cinnabar and ores, ch. 200, S.L. 1943; but raised the tax on gas production from 3 percent to 5.2 percent, ch. 269, S.L. 1945. And South Dakota lowered its tax on the mining or processing of ores from 6 percent to 4 percent, ch. 334, Laws 1945.

[32] Fire control legislation will not be discussed here; nor will timber pest control.

[33] Ch. 22, Acts 1945.

[34] Ch. 269, Laws 1945. But Massachusetts accorded owners the privilege of withdrawing their lands from the classification as forest lands for tax preference purposes (ch. 461, Acts 1943).

[35] Ch. 722, Laws 1943. *Cf.*, E. C. Weitzell, "Maryland's Conservation Law," *Journal of Land & Public Utility Economics*, November 1943, p. 479.

eration. Minnesota in 1943 enacted a requirement (amended in 1945) for the leaving of seed trees of several-named species; Virginia acted similarly with respect to commercial stands of short-leaf and loblolly pine; and Mississippi adopted a Forest Harvesting Act, applicable to the taking of commercial timber and naval stores.[36] Washington legislated that owners and logging operators must obtain permits to log merchantable stands of timber; must leave seed trees standing; and must give performance bonds, in cases of non-compliance, to assure artificial restocking.[37] California outlawed the cutting of conifers under 18 inches in diameter for lumber (in all but the southern quarter of the state), except by permit from the State Forester.[38] Massachusetts created a state committee to prepare and adopt cutting rules.[39]

The laws of these seven states vary in their firmness and completeness. Two of them, for example, do not prescribe criminal penalties for non-compliance; and five of them do not specify that injunctions or other restraining measures may be sought against violators. Three of them follow the flexible method of administratively formulating specific cutting regulations, while the other four spell the regulation out by statute. But whatever the degree to which the regulatory scheme of any one falls short of administrative perfection, the significant point is that all have declared in favor of using the state's police power to control the exploitation of privately-owned timber resources.

Vermont, for its part, decided to give further encouragement to voluntary methods by setting up an annual appropriation of $12,000 to finance a program of assistance to private owners in scientific timber management and marketing.[40] With perhaps something of a similar thought, New Hampshire has set aside an annual Reforestation Week, when reforestation activities will be "plugged"; and Mississippi has inaugurated a statewide forest-conservation educational program.[41] Minnesota established a $3,000 revolving fund for the procurement of tree-planting stock by the state; and for its sale at cost for use. under controlled conditions, for forestry, woodlots, shelterbelts, and so on.[42]

Headway in public forest development is noticeable especially in the Pacific Northwest. Oregon doubled (from $250,000 to $500,000) the amount of bonds that may be issued for forest acquisition; and earmarked the state forest development fund exclusively for acquisition purposes, after the retirement of all bond issues.[43] Later, an appropriation of $100,000 was granted to this fund, in an enactment which generally restated the law on public acquisition and management.[44] Washington also authorized a bond issue of $100,000 for acquisition and related purposes; and Indiana raised from 3 to 5 mills its state-wide property tax to finance a forestry program.[45] Ohio and Minnesota likewise legislated con-

[36] Minnesota, ch. 290, Laws 1943, and ch. 149, Laws 1945; Virginia, ch. 413, Acts 1942; Mississippi, ch. 240, Laws 1944.

[37] Ch. 193, Laws 1945.

[38] Ch. 172, Stats. 1943.

[39] Massachusetts, ch. 539, Acts 1943. The Committee is composed of the director of the forestry division and 4 citizens appointed by the governor, representing respectively the public and three types of woodland owners. Florida provided that timber owners may secure the designation and marking of "seed-trees" (at 3 to 8 per acre) and convey the title to the state (ch. 21940, Laws 1943).

[40] No. 6, Acts 1945. Connecticut enacted a law to provide like assistance (sec. 456g-460g, G.S. 1943 Supp., ch 116).

[41] New Hampshire, ch. 109, Laws 1945; Mississippi, ch. 238, Laws 1944.

[42] Ch. 535, Laws 1945.

[43] Ch. 235, Laws 1943. Formerly, this fund was to revert to the general treasury at this time. In the same act, however, the formula for allocating state forest revenues was altered in favor of the counties, to the disadvantage of the state forest revolving fund.

[44] Ch. 154, Laws 1945.

[45] Washington, ch. 123, Laws 1943; Indiana, No. 52, Acts 1945.

cerning state forests — the former by affording greater leeway to acquisition (by purchase). The latter simplified its law on the acquisition and administration of state forests; redefined state forest areas (now 29, in place of 26 as formerly) and the public lands incorporated into state forests; and empowered the county boards to recommend for inclusion tax-forfeited lands most suited for forestry purposes.[46] The reserving of tax-forfeited lands for public forestry was authorized also in Montana and Oklahoma;[47] and, in Indiana, counties were empowered to acquire, develop and maintain lands for county forests, financed through taxation.[48] Wisconsin enacted stricter provisions to govern withdrawals of county lands under the Forest Crop Law; and Vermont appropriated $6,000 for aiding in the establishment of local forests during 1945-47.[49]

Water

Water problems provoked a marked amount of legislative activity. The semi-arid West, as the peculiarly vital role of water there would lead one to expect, dealt most extensively with the subject; but it will be seen that states quite removed from this region are no longer regarding their water, like their air, as a matter of course. Accordingly, one may infer a widening and maturing concern over the use, abuse, and general state of water resources, undoubtedly induced by a disturbing impairment of water supplies in various areas. But alongside, in the West at least, there is detectable a lurking concern as to how action by the federal government might impair vested water interests or otherwise affect the states' cherished prerogatives in the waters within their boundaries.[50]

Several states codified or recodified their water law, thus increasing the clarity of their water policy and the integration of their water administration. Colorado, for example, rewrote its law governing adjudication of water rights and priorities, replacing with 24 sections the matter contained in 38 sections of the 1935 Code (104-09, 150-89, 199-200).[51] California, more ambitiously, created a water code by revising and consolidating various statutes relating to water use, public water districts, the acquisition and control of water rights, the supervision of dams, and so on.[52] Kansas, for its part, took relatively perhaps the longest step in this direction, by rewriting and codifying numerous sections of its 1935 General Statutes, most of which dated back many years.[53]

The new law at the outset makes a declaration of policy: namely, that the waters of Kansas belong to the people, and may be appropriated by private persons only for beneficial use and only to the extent needed, subject to forfeiture for persistent non-use. Administration of the law is unified under the chief engineer of the division of water resources in the State Board of Agriculture; and the necessary principles and procedures to govern administration and the securing, exercise and loss of water rights are set

[46] Ohio, H. 374, p. 614-616, Laws 1943; Minnesota, ch. 171, Laws 1943. Another Minnesota law empowered county boards to set aside tax-forfeited lands, and dedicate and maintain them as memorial forests (ch. 347 of 1945). A Wisconsin law requires that all sales of standing live timber from lands under the public land commissioner be on a selective cutting basis, comparable with Federal Forest Service practice (ch. 129, Laws 1943).

[47] As county forests in Montana, ch. 70, Laws 1945; and conveyed to the state for state forests in Oklahoma, S. 64, Tit. 74, ch. 12, Sess. Laws 1945.

[48] Ch. 272, Acts 1943.

[49] Wisconsin, ch. 396, Laws 1945; Vermont, No. 86, Acts 1945.

[50] See, for example, H.J.R. No. 6, Colorado S.L. 1943; S.J.R. No. 9, New Mexico Laws 1943; H.C.R.-J, p. 476, North Dakota Laws 1943; S.J.M. No. 7, Oregon Laws 1943; S.C.M. No. 1, Utah Laws 1943; H.J.R. No. 11, Washington Laws 1943.

[51] Ch. 190, S.L. 1943.

[52] Ch. 368 as amended, Laws 1943.

[53] Ch. 390, Laws 1945.

forth in an orderly fashion. In addition to being vested with jurisdiction over all applications for future water rights, the chief engineer is directed to determine, establish, and gather all pertinent information about existing water rights.

Although by no means attempting an overhaul of its water law, Nevada explicitly introduced into its statutes a policy that no water may be appropriated in excess of the reasonable requirements of beneficial use and replaced the old statutory formula governing permissible irrigation diversion with a provision conferring the determination on the state engineer.[54]

A considerable expansion of concern with underground waters also is noticeable in the West. It might be said that the long-standing water interest of most of the western legislatures has emphasized the surface; and that hence the recent attention to the subsurface constitutes a process of rounding out the area of control. Wyoming laid down the principle that "reasonable economic beneficial use shall be the basis, measure and limit of the right to use underground percolating waters at all times."[55] Its legislature furthermore directed the state engineer to conduct investigations and hearings in order to prepare for further legislation on underground waters. Washington provided for the regulation of such waters, also, and subjected them to appropriation only by permit of the supervisor of hydraulics.[56] Utah extended to underground waters the provisions of law regarding reversion of unused appropriations;[57] and, in a complementary measure, authorized the state engineer to plug, repair or otherwise control artesian wells wasting water.[58]

In 1943 Nevada adopted a requirement that all applicants to drill artesian wells must obtain permits from the state engineer; and that all appropriations of water thereunder must be in accordance with the laws relative to water appropriations; and further authorized the use of moneys in the enhanced water-distribution revolving fund for administering the law on underground waters.[59] In 1945 the underlying principle was proclaimed in an explicit provision that Nevada's guiding policy on water appropriations applies to underground as well as to surface waters.[60] Finally, the New Mexico Legislature forbade the state engineer to issue permits for underground appropriations to the detriment of existing water rights; and, moreover, it prescribed penalties for violations of the law and regulations respecting water appropriations.[61]

There are a number of other ways in which active water interest is illustrated. For example, Colorado appropriated $25,000 for an investigation of underground water supplies;[62] Utah appropriated $50,000 for preparatory work, planning for small reservoir sites in order to bring about more effective utilization of small streams;[63] and the former put commissioners and deputies of Colorado's "water districts" under the civil service clause of the state constitution.[64] North Dakota materially broadened the powers and scope of its Water Conservation Commission, thus placing it in position to exercise quite comprehensive authori-

[54] Ch. 56, Nevada Stats. 1945.

[55] Ch. 130, S.L. 1945. Exempts water need for stock, domestic use, and watering lawns and gardens of not over 2 acres.

[56] Ch. 263, Laws 1945.

[57] Ch. 134, Laws 1945.

[58] Ch. 136, Laws 1945. On public lands, the plugging may be at state expense. On private lands, the operation is to be cooperative, on a share-expense basis, if possible; otherwise, on the motion of the state engineer, with a lien against the land to cover expenses not exceeding $100. Appropriates $20,000 for the activity.

[59] Ch. 106 and ch. 23, Stats. 1943.

[60] Ch. 56, Stats. 1945, above cited.

[61] Ch. 70, Laws 1943.

[62] Ch. 74, S.L. 1945.

[63] Item 167 of ch. 142, Laws 1945.

[64] Ch. 156, S.L. 1945.

ty in developing the state's waters.[65] And Wyoming gave considerable attention to "surplus" waters and interstate diversions of water.[66]

As one moves eastward, state legislation concerning water takes on a changed coloration, as might be expected. But while a solicitude for getting maximum benefit from waters available is not as pressing, nor the competition for rights to water by any means as intense, in one way or another a concern for rational water use and conservation is evident in a number of places east of the 100th meridian.

A bit of western flavor is apparent in an Illinois act asserting the public interest in the beneficial, reasonable and conservational use of the state's waters, and creating a Water Resources and Flood Control Board to give effect to that interest.[67] Among the duties of this board are the conduct or direction of surveys and investigations; the determination of ways to put waters to best use; the recommending of water legislation; and the reconciling of conflicting claims to water rights. Ohio's reconstituted and strengthened state water authority, now called the Water Resources Board, has somewhat similar functions, but is in addition given limited power to regulate the drilling, operation and abandonment of wells, and the building of dams.[68] New York declared that waters belonging to the state government are permanently subject to state control and license.[69]

Indiana underwrote a major, long-term survey of its water resources;[70] Mississippi appropriated $70,000 for 1942 and 1943 to carry on a survey of its surface and underground waters;[71] Wisconsin set up an appropriation of $15,000 annually for investigation of underground waters by the University;[72] Minnesota put up a modest contingent sum ($2,500) as its share in a cooperative investigation of the underground waters of the Red River Valley;[73] and Florida authorized the County Board of Dade County (Miami) to set up and manage a well-implemented water conservation district (or districts) in an effort to correct a critical impairment of fresh water tables in that area.[74]

New Jersey, New York, and Pennsylvania all enacted parallel legislation providing for cooperative action among them concerning the protection and equitable diversion of the waters of the Delaware River.[75] Arizona, long a holdout, finally ratified the Colorado River Interstate Compact.[76] Elsewhere, especially in the West, there was also a great deal of activity in negotiating and ratifying agreements respecting interstate streams and waters, too numerous to mention here.

Stream pollution came in for considerable attention. Perhaps the progress recorded during 1942-45 augurs that many

[65] Ch. 328, Laws 1945. Utah abolished the Water Resources Development Division and Advisory Council of the Department of Publicity and Industrial Development and gave to the state engineer the job of completing projects underway, and of investigating and planning water development projects in the future (ch. 116, Laws 1945).

[66] Ch. 88, 129, and 153, Laws 1945.

[67] Laws 1945, p. 383, approved July 17, 1945.

[68] H. 339, effective October 5, 1945, G.C. sec. 408 ff. The Board is barred from concerning itself with water navigation or hydro-electric power.

[69] Ch. 46, Laws 1943.

[70] Ch. 238, Acts 1943, amended by ch. 62 of 1945, so as to increase the annual appropriation for the purpose from $15,000 to $25,000, and to carry over all unexpended balances from year to year until the survey is completed.

[71] Ch. 108, Laws 1942.

[72] Ch. 552, Laws 1945.

[73] Ch. 198, Laws 1945.

[74] Ch. 22935 (No. 421), Laws 1945.

[75] New Jersey, ch. 121, Laws 1944; New York, ch. 709, Laws 1943; Pennsylvania, No. 193, Laws 1943. Also, Act 123, Pennsylvania Acts 1945.

[76] Ch. 5, Laws 1944. Companion pieces were the approval of a contract with the federal government regarding the waters of Lake Meade; and the creation of the Arizona Power Authority for handling Colorado River power allocated to Arizona. Ch. 4 and ch. 32, Laws 1944.

of the states are becoming cognizant of their general backwardness in cleaning up filthy streams and waters.[77] Aside from Pennsylvania (discussed below), Minnesota, Tennessee, and Washington made apparently the most deliberate advances. All three established central state regulatory bodies, endowed with authoritative powers, the relative effectiveness of their respective designs being perhaps in the order named.[78] Mississippi, too, outlawed harmful pollution, and empowered its fish and game commission to control and regulate the disposal of waste in the waterways of the state.[79] Maine's Water Sanitary Board, previously restricted to research and investigation, was vested with pollution control authority;[80] nearby Vermont conferred similar powers on its State Conservation Board;[81] and Massachusetts strengthened the state's powers by subjecting established polluters to control, and by providing penalties for violation of anti-pollution regulations.[82] Kansas extended the pollution control powers of its State Board of Health to include the disposition of salt water and mineral brines.[83] Texas, having found its previous legislation ineffective, rewrote its laws into a brief consolidated statute, but did not go to the extent of setting up a special agency to enforce the anti-pollution injunctions set forth.[84]

Pennsylvania, in addition to legislating for interstate anti-pollution cooperation on the Delaware River, passed quite an aggregate of measures. It authorized the Sanitary Water Board to establish standards of purity and to approve plans of drainage and waste disposal as a condition precedent to coal mining operations;[85] appropriated $5,000,000 to the Schuylkill River Desilting Fund, and authorized the Water and Resources Board to correct and prevent silting in that river resulting from anthracite mining practices;[86] appropriated $12,325,000 to the State Department of Health for various pollution control and stream clearing activities;[87] approved the Ohio River Valley Sanitation Compact, already ratified by the other states concerned;[88] and agreed to cooperate with other interested jurisdictions in controlling pollution in the Potomac River Basin.[89]

Both North Carolina and Virginia prepared the way for future action, the one by creating a State Stream Sanitation and Conservation Committee, with coordinating and investigative duties, and the other by directing the advisory legislative council to make a study and recommendations.[90] The Virginia tentative is apparently bearing fruit, as the 1946 session of its General Assembly has before it a broad control measure.

There was the usual amount of activity in amending drainage and irrigation district laws, pointless to discuss here in any detail. Worth mention, however, is a Washington statute pledging support of the federal government in preventing speculation in the Columbia Basin and other reclamation projects, and in limit-

[77] See Congressman Bailey's article, "Shall We Pass the Buck or Pass Legislation," *State Government*, January 1946.

[78] Minnesota, ch. 395, Laws 1945 (Water Pollution Control Commission). Tennessee, ch. 128, Public Acts 1945 (Stream Pollution Control Commission). Washington, ch. 216, Laws 1945 (Pollution Control Commission).

[79] Ch. 252, Laws 1942.

[80] Ch. 345, P.L. 1945.

[81] No. 109, Acts 1943.

[82] Ch. 615, Laws 1945.

[83] Ch. 234, Laws 1945.

[84] Ch. 285, Laws 1943. Except for the State Fish and Oyster Commission's part in protecting aquatic life, enforcement is left to ordinary judicial and criminal procedures.

[85] Act 177, Acts 1945.

[86] Act 441, Acts 1945.

[87] Ch. 82A (H.B. 67), Acts 1945.

[88] Act 50, Acts 1945.

[89] Act 405, Acts 1945.

[90] North Carolina, S.B. 378, ratified March 21, 1945; Virginia, No. 23, Acts 1944.

ing size of holdings there to units not larger than 160 nor smaller than 10 acres.[91] A second measure of interest is a Louisiana statute authorizing the State Department of Public Works to engage directly in the business of drainage and reclamation.[92] As we well know, drainage has hitherto been pretty much a local affair. This act originally carried a $5,000,000 appropriation for the biennium; but that important detail was stricken by item veto. A third measure deserving notice is an Illinois act modifying the method of determining assessment benefits in drainage districts (organized under the 1879 law). It provides for a gradation of lands by 40-acre units, according to degree of benefit; for reclassification whenever appropriate; and for a public record of the classification in map or tabular form.[93] Indiana and Minnesota established commissions to revise and codify their drainage laws; and New York State rewrote and consolidated various of its drainage statutes.[94]

Among miscellaneous water resource enactments are the following: an amendment to the Michigan Constitution to extend the state's public works powers to the improvement and control of rivers, streams, and water levels;[95] a projected amendment to the Pennsylvania Constitution to authorize the state to borrow up to $50,000,000 to finance flood control and other public projects;[96] an Illinois appropriation of $200,000 to the Department of Public Works and Buildings to conduct surveys and make plans for flood control and water conservation;[97] a Rhode Island act authorizing the governor to conclude interstate compacts for the protection of water resources;[98] further New York legislation in the interests of flood control;[99] and the creation of a flood control and water resources commission in Indiana.[100]

Property Tax Administration

Although hard statistics show that the property tax accounts for a continually diminishing portion of public revenues as the years go by, it nonetheless persists as a substantial and steady contributor especially to local finances. During the war years it continued to be a lively and respectable item; and it is worthy of note that legislative expressions of disgruntlement with the load of taxation borne by real property have been conspicuous rather by their paucity during the past 4 years. To the contrary, tax limits have indeed been raised in several places, doubtlessly reflecting the prosperity of the times.[101] Too, the many recent upward revisions in state school aids have been motivated apparently solely by a desire to increase school salaries, perfect equalization and to augment school resources, rather than to relieve local distress or to lighten the load of local prop-

[91] Ch. 275, Laws 1943. The state's Columbia River Basin Commission was also recreated, and reorganized into a reclamation section and a resources section. Ch. 283, Laws 1943.

[92] No. 58, Acts 1944. The authority granted (which includes also the traditional powers of cooperating with local districts and the federal government) is declared to be supplementary to all existing drainage legislation.

[93] Laws 1945, p. 732, approved July 17, 1945.

[94] Indiana, ch. 168, Acts 1943; Minnesota, ch. 491, Laws 1945; New York, ch. 889, Laws 1945.

[95] H.J.R. No. 2, ratified by people April 2, 1945.

[96] Res. No. 4, Acts 1945.

[97] S. 114, p. 190, Laws 1945. See also p. 376, Laws 1945, for the basic legislation enabling this Department to carry out water utilization and control functions.

[98] Ch. 1224, Laws 1942.

[99] Laws of 1942: ch. 363 extends the life of the temporary commission to assist with federal programs in the state, and ch. 582 adds an appropriation of $230,000 for flood control projects. Ch. 254 of 1945 adds $30,000 more to the funds available to the temporary Flood Control Commission to survey and study flood control problems.

[100] Ch. 318, Acts 1945.

[101] For example: Idaho, ch. 82, Laws 1945; South Dakota, ch. 322 and ch. 324, Laws 1945; Utah, ch. 109, Laws 1945; Iowa, ch. 216, Laws 1943; Missouri, Laws 1943, p. 1008; North Dakota, ch. 268, Laws 1943.

erty taxation.[102] In the same spirit, the Alabama Legislature proposed to lift the state income tax out of the confines of its present exclusive consignment to relieve the burden of the state property tax (after the floating debt of 1932 will have been liquidated).[103]

It would be impudent, of course, to project from this recent softening of plaints about the property tax any forecast about the future; or, indeed, to conclude that the old theme-song has been utterly absent from the cogitations of the legislatures. One finds at least muted undertones of it in a few of the resolutions creating tax survey committees such as habitually appear in the session laws; and in Iowa, at least, there appeared a novel expression of the concern that was so much in evidence during the thirties. There the legislature created a special permanent fund, financed by an annual allocation of $500,000, to be used to relieve agricultural lands (not all property) from school district taxes in excess of 15 mills throughout the state.[104] But the prevailing spirit during 1942-45 is expressed in moderated measures to perfect the existing system.

Advancement along the way of increasing the strength and scope of state supervision over the assessment process was recorded particularly in Florida and Louisiana.[105] The former, amplifying a pre-existing scheme, required that all local tax authorities follow the "standard measure of values" prescribed by the comptroller; provided for the preparation and issue of a statewide manual of instructions, to the composing and periodic revision of which all interested officials will be given opportunity to contribute; and directed the carrying out of "constant research," the keeping of "accurate tabulations" of property tax conditions, and the formulation of periodic legislative recommendations for improvements in the tax system. Louisiana spelled out quite an array of duties for its Board of State Affairs (Louisiana Tax Commission), with the object, among others, of securing uniformity and competence in valuation methods, controlling local assessors, and providing the legislature with considered advice in tax problems.

Illinois, after liquidating its Tax Commission and transferring its duties to the Department of Revenue under a rewritten statute,[106] changed the norm of state equalization from "just relation" among the counties, to a "full, fair cash value" everywhere; and, correspondingly, eliminated certain statutory provisos that hampered the attainment of a thoroughgoing state equalization.[107] Wyoming directed its State Board of Equalization to contrive and install in the offices of all county assessors a system of uniform property valuations and granted an appropriation of $20,000 for the activity.[108]

Maryland adopted an enterprising system of continuous assessment, evidently with the aim of leveling out the work load of local assessors and enabling them to perform their duties more deliberately.[109] The State Tax Commission was directed, in consultation with local author-

[102] An exception to this generalization would be ch. 6, New Jersey Laws 1945, which appropriated $4,000,000 for distribution among the localities of the state to reduce the school tax.

[103] H.B. 130, approved June 16, 1945.

[104] Ch. 192, Laws 1945. While not quite in point, it might also be mentioned here that Louisiana granted a special tax concession to tung tree land (No. 107, Acts 1944) and encouraged the making of improvements on agricultural lands by exempting them from any upward assessment reclassification during 1943-52 (No. 328, Acts 1942). New Jersey sought to prevent local taxation of growing crops (ch. 63, Laws 1943).

[105] Florida, ch. 22079, Laws 1943; Louisiana, Act 156, Acts 1942 (and see also Act 157 of same year).

[106] Laws 1943, p. 1136-1170.

[107] Laws 1945, p. 1212.

[108] Ch. 141, Laws 1945.

[109] Ch. 717, Laws 1943. The Commission may also order reassessments out of order when warranted.

ities, to establish 5 districts or 5 property categories in every county, one each to be subjected to reassessment annually, in rotation, so that there will be a complete reassessment every 5-year cycle. In Nebraska, county boards were authorized to set up special real property classification committees, composed of 3 citizens, with the task of making a classification of rural properties which, if approved by the county equalization board, becomes a mandatory guide to the assessor in valuing the rural lands of the county.[110]

A popular occupation, exemplified in numerous instances, was the chinking of various cracks through which property escapes assessment and taxation. One favorite has been legislation to prepare the way for taxation of the property of the federal government and its instrumentalities, wherever and whenever permissible; another has been to require that the recorder notify the assessor of ownership changes; and a third is provision for rectifying invalidated, omitted, and inadequate assessments.

The next step in the tax process—the collection and enforcement of tax levies—includes the notoriously troublesome subject of tax deeds, which warrants treatment at some length. Of special interest is a Florida law of 1943 (ch. 22079), establishing an *in rem* procedure for the taking of tax deeds. We may presume that this enactment culminates almost 2 decades of experiment with a tax forfeiture situation dramatized by the collapse of the feverishly extravagant real estate boom in the mid-20's, which left a wake of nonresident, unknown, and otherwise uninterested owners. As far back as 1925, the legislature had proclaimed that tax procedure statutes were directory only; and that property-owners could not rely on technical defects or omissions in administration to defeat the payment of their tax obligations. In 1929 this pronouncement was underscored by a further declaration that all taxpayers are presumed to know, at their peril, that taxes are due and payable on April first, regardless of notice. The *in rem* procedure incorporated in the 1943 tax law recodification is, of course, the logical end result of such doctrine, which had been preserved on the statute books through successive revisions (notably, those of 1935 and 1941).

Under the new procedure a tax deed conveying "absolutely" a "fee simple title" to the county can be secured on application to the court two years after the date of the tax certificate. The court action is against the property itself, without necessity of naming any person as defendant. Notice is given merely by one publication describing the land; and by mailing a copy thereof to the last owner or taxpayer listed on the tax roll, and to any municipality or taxing district in which the land lies. It is not required that any other parties in interest be notified; nor that "diligent search" be made for unknown owners or unknown addresses. Moreover, failure to receive even this limited notice is no defense.

This procedure is available only to the counties, with respect to properties bid off to them at the tax sale. Private holders of tax certificates remain entitled to merely an administrative tax deed. However, there is some mitigation of the notices required following application by the tax-certificate holder for issuance of tax deed: no longer must "diligent search" be made, and no longer is it necessary that any mortgagees other than those entered on the tax record be notified.

The West Virginia Legislature in 1945 (ch. 140) substituted a "judicial pro-

[110] Ch. 188, Laws 1945.

ceeding" for the so-called "administrative *ex parte* proceeding" established in 1941, thus continuing its careful attention to the problems of tax-delinquent lands. The differences between the two procedures, however, are much less fundamental than their respective labels might connote. Both rely on an *in personam* court action to clarify title prior to issuance of tax deed, with the traditional publications, personal notice, and "diligent searches" to discover all parties in interest; and both aim to secure "derivative" rather than "original" titles, though in each case free of taint from irregularities, errors, or mistakes in procedure.[111]

A notable change is the complete gathering of responsibility into the hands of the "deputy commissioners of forfeited and delinquent lands" of the several counties, for the annual institution of title confirmation suits. These functionaries are charged with the duty of bringing suit, making title searches, and so on, for *all* lands listed in the annual certificate of the state auditor, at a compensation of not less than $10 per tract.[112] Notable also is the 1945 design that all tax-forfeited land will be deeded to private purchasers. Land not bringing a suitable price is merely held over for a new sale, whereas formerly it was conveyed to the State Public Land Corporation.

We may assume that in both Florida and West Virginia the problem has been one of volume forfeitures of low value or abandoned tracts, posing the need for a systematic, expeditious, annual mopping-up process. That dealt with by the Maryland Legislature was of a different order: the Maryland predilection for treating a large variety of subject-matter by special and local, rather than general legislation. In the 1943 session, the legislature adopted a uniform procedure, replacing two alternative procedures (containing various local exceptions) hitherto on the statute books. The new law, in addition to providing virtual uniformity throughout all counties of the state,[113] establishes a more definite, modern, and clean-cut process for the maturing and perfecting of tax deeds, although by advanced standards the approach remains "conservative."

The legislature proclaims that the new law "shall be liberally construed as remedial legislation to encourage the foreclosure of rights of redemption . . . and for decreeing of marketable titles." The ancient method of collectors' sales by way of distress or execution is replaced by the method of tax certificate sales. The tax certificate purchaser may bring a suit in equity to foreclose rights of redemption any time after a year and a day from date of tax sale; but must bring the suit within 2 years, under pain of forfeiting all his rights and investment. Record searches for parties entitled to be made defendants do not have to extend further back than 40 years. The decree of the court forecloses all rights of redemption and results in an immediately marketable deed, whereas under old laws the right of redemption had lasted for a year after the confirmation of deed.

The perennial subject of tax titles also came in for attention elsewhere. South Dakota broadened previous law providing for an action to foreclose tax lien and quiet title simultaneously by strik-

[111] For certain limited reasons, in each instance potential claimants are accorded one year's grace to upset title; and the claims of persons under disability are also safeguarded.

[112] Formerly, private purchasers of tax-forfeited property had to look after themselves; and the deputies merely looked after properties bid in for the State Public Land Corporation for lack of a minimum private offer.

[113] Ch. 761 of 1943. The principal local variation is a concession in favor of Baltimore.

ing out the former limitations of $6 per acre or $50 per lot on the lands to which the procedure is applicable.[114] Maine added further to its variety of statutory procedures by affording a suit in equity to foreclose the "mortgage" created by the tax lien.[115] Kansas removed a requirement that 5 years must elapse from date of tax deed before quiet title action may be brought.[116] Montana made available to purchasers of tax deeds an *in personam* quiet title procedure.[117] Massachusetts put a 1-year limit on the institution of suits to upset court decrees foreclosing the right to redeem tax-forfeited property.[118] California required that, as a condition precedent to holding a tax deed void, the court must require that the successful plaintiff pay up within 6 months all taxes, costs, penalties, and interest defaulted or due.[119]

Efforts to reduce somewhat the uncertainties and confusion in the status of properties against which tax claims are outstanding are reflected further in such measures as the following: A Montana statute requiring all former owners of heretofore tax-forfeited land to come in and assert their claims within a short time, or be forever barred:[120] A Colorado law explicitly extending the 7-year limitation on actions to upset title as against persons in possession, to titles gained through conveyance by any public official whatsoever;[121] and another law of the same state putting a 15-year limit on all liens created by any tax certificate assigned to anyone other than the levying unit:[122] The mere mention of a statute such as this serves to illustrate how encrusted with unresolved legal claims a property can sometimes become under state tax laws.

The disposition of legislative bodies to display caution and restraint toward disturbing private property rights involved in tax claims is illustrated by the continued vitality of various indulgences during even the boom years of the war. California, citing the war emergency, suspended tax sales to the public, first during 1943 and 1944, and later extended the suspension through 1946.[123] A number of states reduced the interest on delinquent taxes or on tax certificates: for example, Maryland (from 10-15 to 6 percent); New Hampshire (from 10-12 to 8-10 percent); Arizona (from 15 to 10 percent); Nebraska (12 to 7 percent); North Carolina (8 to 6 percent).[124] Oklahoma, Montana, and Pennsylvania made conditional provision for outright abatement of back penalties and interest; and Minnesota granted similar concessions.[125] Delinquent owners were granted concessions, in the shape of installment payments, in clearing off their obligations or recovering their property in New Jersey, Minnesota, Pennsylvania, and Washington.[126] Here and there vari-

[114] Ch. 165, Laws 1945.

[115] Ch. 68, P.L. 1945. See also ch. 75, P.L. 1945.

[116] Ch. 241, Laws 1945.

[117] Ch. 43, Laws 1945.

[118] Ch. 226, Laws 1945.

[119] Ch. 516, Stats. 1945. California also passed a measure designed to facilitate the determination of questionable tax deeds issued prior to 1939 (ch. 637, Stats. 1945); but the voters, in 1944, rejected a proposal to validate all tax deeds except as attacked in a court action instituted within one year from date of deed.

[120] Ch. 144, Laws 1945.

[121] Ch. 101, Laws 1945.

[122] Ch. 241, Laws 1945. Virginia, in this connection, released all tax liens antedating January 1, 1923 (ch. 92, Acts 1942).

[123] Ch. 362, Laws 1943; ch. 427, Laws 1945.

[124] Arizona, ch. 18, Laws 1943; Maryland, ch. 761, Laws 1943; Nebraska, ch. 194, Laws 1945; New Hampshire, ch. 159, Laws 1943; North Carolina, H.B. 161, ratified Feb. 23, 1945. See also Indiana, ch. 322, Acts 1945. California made a temporary reduction of delinquent penalty from 8 percent to 6 percent (ch. 366, Stats. 1943).

[125] Montana, ch. 159, Laws 1943; Oklahoma, S. 105, Tit. 68, ch. 11-D, S.L. 1945; Oklahoma, H. 21, Tit. 68, ch. 2, S.L. 1945; Pennsylvania, Act 150, Acts 1943; Minnesota, ch. 121 and ch. 324, Laws 1945. Pennsylvania again in 1945, Act 386 and Act 429 of that year.

[126] Minnesota, ch. 296 and ch. 121, Laws 1945; New Jersey, ch. 108, Laws 1944; Pennsylvania, ch. 150, Laws 1943; Washington, ch. 223, Laws 1943. The Washington Legislature also granted a period of grace to laggard installment payers (ch. 134, Laws 1945).

ous other concessions to former owners were provided; but the above mentioned examples are sufficient to illustrate that habits of solicitude for the ailing taxpayer persist in good times as well as bad.

Public Lands

A good deal of public land legislation relates to land to which the state or county has taken "title" as a consequence of excessive tax delinquencies; and already, in the preceding section, we have had some introduction to this topic.[127]

Minnesota was probably the most prolific in tax-reverted land laws during the last 4 years. Provisions for installment purchase, by a 10-percent down payment and the balance within 10 years, and for the reinstatement of defaulting installment purchasers were enacted in both 1943 and 1945.[128] Another law, however, provides that, if the defaulted purchase lies in a conservation area, it is not subject to resale until after reclassification and reappraisal.[129] Coordination of disposition policies with rural zoning ordinances is seen in a measure which permits land in a restricted zone to be disposed of for timber production under private ownership with the consent of the Conservation Commissioner.[130] But it is not certain that like coordination is reflected in another law which authorizes the sale of suitable land for agricultural purposes in a restricted zone.[131] However, here again the sale must meet the conservation commissioner's approval.

Michigan extended to May 1947 the operation of a noteworthy act of 1937, establishing a State Land Office Board to classify, rehabilitate, and rationally dispose of tax-forfeited lands in the northern half of the state.[132] A tentative step in the same direction was also taken by Maine in a measure which places control over tax-forfeited land in the "unorganized" territory of north Maine in the hands of the state tax assessor until such time as the legislature decides on what to do with it.[133] Pending further legislative action the assessor is to make a complete inventory of this land and, with the aid of the State Forestry Commission, is to formulate recommendations to the legislature for its appropriate disposition.

Arkansas gave attention to its famous Land Policy Act of 1939 because of a situation arising from the abolition of the State Planning Board, a part of which was the Land Use Committee, vested with duties in the classification and appraisal of tax-forfeited lands. The 1945 legislation[134] provides for a Land-Use Committee appointed by the land commissioner, presumably (though not certainly) to carry on the important functions of its liquidated predecessor. Furthermore, it gives express legislative sanction to the appointment of appraisers by the land commissioner, as well as to the appraisal system.

California, too, rewrote its law of 1940, which outlines a policy of classifying tax-deeded property precedent to its disposition. The classes are: (a) suitable for public ownership; (b) suitable for return to private ownership; and (c)

[127] Further discussion of public lands will be found also in the sections on Subsurface Development and Forestry.

[128] Ch. 627, Laws 1943; ch. 98 and ch. 505, Laws 1945.

[129] Ch. 381, Laws 1945.

[130] Ch. 574, Laws 1945.

[131] Ch. 151, Laws 1945. The Minnesota legislation made sure that timber will be properly appraised before sale of tax-deed land in counties where state forests are located (ch. 150, Laws 1945); requires the reversion to the state of any tax-forfeited land conveyed to a local unit for a specific purpose, when that purpose fails (ch. 204, Laws 1943); and allows for conveyance to the public by the former owner of a deed to tax-forfeited land (ch. 327, Laws 1943).

[132] No. 61, Public Acts 1945.

[133] Ch. 42, Public Laws 1945.

[134] Act 49 of 1945.

wasteland. The main outlines of the old law were carried over in the 1943 revision but in more concise form.[135] The old Land Classification Commission was abolished, however; and its functions were consolidated in the Advisory Committee on Tax-Deeded Property. Other changes include: the elimination of the "tentative" classification step from the procedure; the incorporation of a clause holding tax-deeded property open to sale pending classification; a simplification of the power to make reclassifications; and a number of new code sections designed to clarify the title status of properties disposed of under this law.[136]

Pennsylvania enacted a proviso that the sale of any tax-forfeited property by a political subdivision for a price less than what is due on it must have the court's approval; and Kansas granted authority to counties to sell tax-forfeited lands, otherwise undisposable, at whatever they will bring.[137] The latter also permitted the consolidation of two or more tracts into a single unit for sale purposes.[138] Washington provided for the rental of tax-forfeited property, for the sale of the surface separate from the mineral rights (which may be reserved to the county), and for the separate sale of mineral or timber resources.[139] North Dakota stipulated that tax-forfeited lands offered at private sale after January 1 shall be sold subject to existing farm leases for the year; and Wisconsin made various revisions in its reversion and disposal laws.[140]

Passing from tax-reverted to public lands in general, we find Wisconsin appropriating $24,000 to the Commissioners of Public Lands for continuing the appraisal of state lands; and Alabama establishing the office of Land Agent, with the duty of making and keeping up-to-date a complete and accurate inventory of Alabama's public lands.[141] This inventory is to show the general character of each tract, whether used or unused, and how acquired; and the whole is to be mapped on a county-to-county basis. All "unused" land is to be classified by the Alabama Department of Conservation according to how it should be utilized; and procedures are provided for its management and disposition. California, for its part, codified various of its statutes relating to the handling of public lands; and Arizona created a new State Land Department, headed by an appointive commissioner, into whose hands are concentrated the powers of the old ex-officio land board, the Land Settlement Commission and the State Water Commission.[142]

Minnesota deleted from its law the proviso that a purchaser of state lands must sign an agreement to reside on and cultivate his purchase; Mississippi legislated at length on the administration of sixteenth section and lieu lands (granted for educational purposes), a topic that has pressed for attention of late; Wyoming filled certain gaps in its previous legislation regarding the entry of Carey Act Lands; and North Dakota, while providing further for the sale of Bank of North Dakota lands, temporarily suspended (1943-1945) the sale of farm and grazing lands owned by the state and

[135] Ch. 754, Stats. 1943

[136] For a digest of the 1940 act, see 1940 "Summary of Outstanding Federal and State Legislation Affecting Rural Land Use" (L.E. *Bulletin* 57, USDA, Washington, 1940).

[137] Pennsylvania, Act 255, Acts 1945; Kansas, ch. 362, Laws 1945.

[138] Ch. 302, Laws 1943.

[139] Ch. 170 and ch. 172, Laws 1945; ch. 19, Laws 1943.

[140] North Dakota, ch. 120 and ch. 121, Laws 1943; Wisconsin, chs. 64, 66, 100, 117, 166 and 567, Laws 1945.

[141] Wisconsin, ch. 211, Laws 1945; Alabama, H.B. 26, approved July 9, 1945

[142] Ch. 759, California Stats. 1943; ch. 28, Arizona Laws 1943.

its subdivisions; and Kentucky clarified provisions relating to the preemption of vacant lands.[143] It is odd at this late date to find preemption still going on in an eastern state. California at this time also decided on the final liquidation of the land settlement experiment initiated in the State Lands Settlement Act of 1917.[144]

In the West leasing practices elicited widespread consideration. Of the enactments in this field, Montana's is perhaps the most deserving of a detailed digest, as it aims at the application of a studied policy.[145] Under it agricultural leases of state lands are to be on a crop-share basis and conditioned on practices of good husbandry, optimum production consistent with maintenance of productivity, and erosion and weed control. Grazing leases are to be on an animal-unit capacity basis for a full 12-month period every year, and conditioned on practices assuring maintenance and conservation of range capacity. Urban properties, on the other hand, will be leased simply on a "fair value" basis. Periodic appraisals to determine correct lease rates are required; and, in the case of grazing lands, factors to govern appraisals are spelled out. Provisions to govern transition to the new system are made, as well as for the penalizing of lessees who violate the lease terms. In a second law, furthermore, Montana made improvements in its grazing district legislation.[146]

Colorado sought to accord better protection to its state and school lands by conditioning the renewal rights of a lessee upon his faithful compliance with the terms of his old lease and his good care of the premises; by eliminating the proviso that renewals shall be on like conditions as the old lease; and by directing the State Board, in determining rental rates, to consider the lessee's use, conservation, and improvement of the land, as well as the land's relation to the unit controlled by the lessee.[147] A like motive apparently induced the Oklahoma Legislature to require that all leases of preference-right lands must specify, and otherwise limit, the uses to which the land may be put.[148] But Wyoming's legislation on preference rights was apparently motivated primarily by a desire to integrate the use of state lands more closely with the needs of ranching units.[149]

Real Property and Land Tenure

Legislative action in the field of what we might term the familial branch of property law, though small in quantity, was nonetheless consequential when it is considered that this kind of law is consecrated by age. Most interesting, perhaps, of the legislative crop during the 4 years is a law establishing the community property system in Oklahoma.[150] This raises to 9 the number of community property states.

Arkansas, Florida, and Tennessee accorded to a married woman the right to

[143] Minnesota, ch. 321, Laws 1943; Wyoming, ch. 54 and ch. 55, S.L. 1943; North Dakota, ch. 205 and ch. 1, Laws 1943; Kentucky, ch. 94, Acts 1944. The Mississippi legislation followed a 1940 constitutional amendment allowing more flexibility in handling lieu lands (ch. 162, ch. 333, ch. 329 and ch. 163, Laws 1942).

[144] Ch. 217, Stats 1943. Arkansas placed the disposition of island lands, formed in navigable streams, under the same provisions as other state lands, thus completing the integration of state land administration (Act 192 of 1945).

[145] Ch. 140, Montana Laws 1945.

[146] Ch. 199, Laws 1945.

[147] Ch. 194, Laws 1945. See also Colorado's amendments to the laws on investment of school funds; and the disposition of mortgage-foreclosed lands (ch. 223, Laws 1945).

[148] H. 440, Tit. 64, ch. 1-c, S.L. 1943.

[149] Ch. 60, S.L. 1943; ch. 34, S.L. 1945. Other public land leasing statutes: ch. 159, Nebraska Laws 1943; ch. 58, Arizona Laws 1945.

[150] H. 218, Tit. 32, S.L. 1945. Oregon went so far as to allow community ownership of property, at the option of husband and wife (ch. 440, Laws 1943); and followed this action with a memorial to the various non-community property states (now 39) to band together to get Congress to discontinue the present concessions to community property states in the levy of federal income taxes (S.J.M. No. 3 of 1945).

dispose of, and Alabama the right to lease, her own property without the consent of her husband.[151] Pennsylania, too, accorded to married women the same right to dispose of property as a married man or unmarried woman.[152] Arkansas, furthermore, extended the widow's dower right to cover the proceeds from mineral leases on lands in which she has a dower interest; and Alabama raised from one-sixth to one-third the share of money a widow can be alloted as cash equivalent if her dower interest is sold.[153] Conversely, Arkansas and Wisconsin both legislated on the subject of the husband's curtesy right.[154] In Massachusetts, the share of a decedent's estate going to surviving spouse where there is no issue, before division with other heirs can occur, was raised from $5,000 to $10,000.[155]

The Florida Legislature, for some reason, undertook to clarify its law on life estates.[156] The famous old Rule in Shelley's Case was explicitly abolished; the prohibition against perpetuities was declared to apply whether the attempt to create an entail is express or implied; and personal property was declared subject, in the same manner as realty, to the rule against entails. But Delaware amended its law so as to provide that the rule against perpetuities shall not be applicable to any trust created by an employer for the exclusive benefit of his employees.[157] Rhode Island, for its part, abolished the ancient doctrine of ancestral estates in intestacies.[158]

In the field of land ownership, specifically, legislative attention was directed mostly at aliens.[159] Although restrictions on alien land-tenures have not been uncommon in the past, the war years have yielded several extreme versions, patently anti-Japanese in purpose. Arkansas, for example, minced no words in naming whom it meant in a brief 1943 enactment: "no Japanese or a descendant of a Japanese shall ever purchase or hold title to any lands in this State," or be directly or indirectly interested in any land bought or owned, or leased for over one year, by any one else.[160]

Other states aimed more judiciously at "aliens ineligible for citizenship" and thus avoided discrimination against race or parentage *per se*. Oregon, for example, sought to assure that they be precluded from enjoying the use, occupancy or even the benefit, direct or indirect, of any agricultural land through whatever device or arrangement.[161] Wyoming, in less detailed phraseology, prohibited them from "acquiring, possessing, enjoying, using, leasing, transferring, transmitting and inheriting real property, or any interest therein . . . or having in whole or in part the beneficial use thereof."[162] Utah, in a lengthier enactment, limited the property acquisition and guardianship rights of such aliens, and of corporations controlled by them, to whatever is allowed by treaty, and their right to agricultural leases to 1-year terms.[163] All three of these states went beyond the traditional sanctions of

[151] Arkansas, Act 69 of 1943; Florida, ch. 21932, Laws 1943; Tennessee, ch. 131, Laws 1943; Alabama, No. 445, Acts 1943.

[152] Act 265, Acts 1945.

[153] Arkansas, Act 143 of 1945; Alabama, H.B. 10, approved July 6, 1945.

[154] Arkansas, No. 69 of 1943; Wisconsin, ch. 316, Laws 1943.

[155] Ch. 283, Laws 1945.

[156] Ch. 23126 (No. 612), Laws 1945.

[157] Ch. 224, Laws 1945. Also, Illinois, S. 425 of 1945; and Alabama, No. 306 of 1945.

[158] Ch. 1283, Laws 1943.

[159] Legislation on corporate ownership, for example, was meager.

[160] Act 47 of 1943.

[161] Ch. 436, Oregon Laws of 1945, expanding previous legislation.

[162] Ch. 35, S.L. 1943. Chinese were excepted.

[163] Ch. 85, Laws 1943. California also revised and

(*Footnote 163 continued on page 251*)

escheat and voidance by prescribing heavy fines and imprisonment for violations, or for conspiring in violations, whether the culprit be citizen or alien; and Utah and Oregon put the burden of proof of establishing his eligibility status on any alien accused by the state of belonging to the proscribed class.

In the realm of landlord-tenant relations, a Washington law provides liability for commission of waste by tenants by sufferance, tenants at will, and subtenants.[164] Damages of $50, or treble damages, whichever is greater, may be recovered, along with attorney's fee. In Delaware, the tenant law was amended so as to permit the removal of top fodder by an outgoing tenant, in two of that state's three counties (Kent and Sussex).[165] In its third county (New Castle), provision was made for the automatic extension from year to year of farm leases, if 6 months before the end of the term neither party gives notice.[166] Missouri allowed change of venue in landlord-tenant cases.[167]

Termination of tenancies came in for attention also in Maryland, Iowa, and Wisconsin.[168] In the first-named, the period of required written notice to remove, in the case of tenancies from year-to-year, was reduced from 6 to 3 months. In the second, allowable methods for giving notice previously prescribed were set forth; and, in the third, merely technical changes were made.

In the "credit" aspect of property law, California, Washington, and Michigan raised their "homestead" exemptions (i.e., exemptions from attachment and execution), the first from $5,000 to $6,000, the second from $2,000 to $4,000, and the third from $1,500 to $2,500.[169] California extended the existence of its Farm Debt Adjustment Commission to September 15, 1945;[170] and New York gave further consideration to mortgage moratoria. One of New York's laws continued the emergency moratorium on deficiency judgments until July 1, 1945; and another did the same for mortgage foreclosures.[171] Later, the mortgage moratorium was extended to July 1, 1946.[172] Earlier, the state Mortgage Commission had been accorded temporary extensions of its life.[173] Illinois made its contribution in the form of a Commission to study mortgage and foreclosure laws with a view to ascertaining desirable modifications.[174]

Elsewhere, measures were taken to put a term on the assertion of mortgage claims. Massachusetts outlawed the bringing of actions for deficiency judgments after the elapse of 2 years from the date of the foreclosure sale.[175] Florida established a 20-year statute of limitations on actions to foreclose a mortgage; and Minnesota forbade any proceeding to foreclose a mortgage executed prior to November 1, 1909, unless notice is filed

(*Footnote 163 continued from page 250*)

perfected its own long-standing legislation on the subject (ch. 1003 and 1059, Calif. Stats. 1943); but in a later law, somewhat "liberalized" the inheritance rights of aliens in general (ch. 1160, Stats. 1945).

164 Ch. 22, Laws 1943.

165 Ch. 179, Laws 1943.

166 Ch. 256, Laws 1945. The parties may, of course, contract otherwise.

167 S.B. 299, approved Feb. 9, 1946.

168 Maryland, ch. 842, Laws 1943; Iowa, ch. 255, Laws 1943; Wisconsin, ch. 113, Laws 1943.

169 California, ch. 789, Stats. 1945 (for head of family; for others, the figure was raised from $1,000 to $2,000); Washington, ch. 196, Laws 1945; Michigan, No. 13, Public Acts 1945, on authority of a 1943 Constitutional amendment. The one major change of the period in homestead *tax* exemptions was an increase of the exempted valuation in Arkansas, from $1,000 to $3,000 (Act 205 of 1945).

170 Ch. 1018, Laws 1943.

171 Ch. 563 and ch. 562, Laws 1944.

172 Ch. 378, Laws 1945.

173 Ch. 223, Laws 1943; and ch. 638, Laws 1942. In 1942, also, there was an act regarding procedures for allocating surplus revenues from defaulted properties to meet the claims of the mortgagee (ch. 790, Laws 1942).

174 Laws 1945, p. 101, approved July 25, 1945.

175 Ch. 607, Laws 1945. Another Massachusetts law provided that attachments of land are dissolved 6 years after recording, unless a petition for extension has been granted (ch. 339, Laws 1945).

or action commenced before January 1, 1946.[176] Indiana validated all mortgage foreclosure sales, duly made, after the expiration of a 1-year redemption period.[177]

More generally in the field of land titles of all kinds, Michigan prescribed that absolute and full reliance can be had on a title record going back 40 years; and correlatively extinguished all anterior claims not recorded or asserted within 40 years.[178] No disability or any other excuse is allowed to toll the running of this statute of limitations. Wisconsin lowered to 10 years (from 20) the period in which a defectively executed (but signed) instrument of record affecting a real estate title is automatically cured.[179] Similarly, Kansas set a 25-year period in which deeds of record, conveying platted realty, will be cured of defects in the grantor's title;[180] and Montana eliminated from its quiet title procedure a requirement that plaintiff's affidavit must recite the facts to prove he had diligently searched for unknown or absent defendants.[181] Texas established a procedure to facilitate removing clouds from title to mineral interests, where there are a multiplicity of parties in interest, a portion of whom are unknown or nonresident and have not bothered to pay their taxes for the preceding 5 years.[182]

A final word on a relevant subject: the Torrens system. It is notorious that this scheme of title registration has made slow progress in America. Some further evidence of this state of affairs may be found in Nebraska's repeal of its Torrens law;[183] and in a Colorado statute to permit withdrawals of any property registered under the Torrens system of that state.[184] Georgia, on the other hand, passed perfecting amendments to its law, as by setting forth a procedure whereby owner's certificates may be obtained for the smaller parcels into which a larger tract is subdivided;[185] and Oregon and North Carolina also displayed a continuing interest by effecting various improvements in their land registration statutes.[186]

Planning and Zoning

At times in the recent past, there has been some concern lest the state planning board movement, which spread rapidly during the 30's, might become moribund as a result of legislative indifference or opposition. But in fact, while more and more states have abolished their autonomous planning boards, at the same time the central planning function has frequently been preserved in another organizational setting, in which the old planning functions are joined to others. Whether this is for better or for worse remains to be seen; but the trend does to some extent organizationally integrate "planning" with other activities.

The present tendency is in the direction of organs with "development" in their title[187]—perhaps to connote emphasis on realization of projected schemes,

[176] Florida, ch. 22560 (No. 46), Laws 1945; Minnesota, ch. 363, Laws 1945. Minnesota also validated mortgage foreclosures heretofore made, if tainted only by certain technical irregularities spelled out at length in the statute (ch. 331, Laws 1945).

[177] Ch. 285, Acts 1945. Other statutes of limitation were acted on by New Mexico (ch. 34, Laws 1945); Michigan (No. 14, P.A. 1945); and Texas (ch. 278, S.L. 1945).

[178] Act 200, P.A. 1945. A period of grace following enactment (1 year) is of course allowed.

[179] Ch. 542, Laws 1945.

[180] Ch. 265, Laws 1945.

[181] Ch. 8, Laws 1945.

[182] Ch. 281, S.L. 1945.

[183] Ch. 173, Laws 1943, repealing Art. 7, ch. 76, C.S. 1929.

[184] Ch. 224, S.L. 1943.

[185] No. 66, pp. 326-331, Laws 1943.

[186] Ch. 466, N.C. S.L. 1943; S.B. 51 of N.C., ratified Feb. 3, 1945; and ch. 22 and 207, Oregon Laws 1943. New York set up requirements governing the registration of real property titles (ch. 771, Laws 1945).

[187] South Carolina, the State Department of Research, Planning and Development (No. 122, Acts 1945). Arkansas, Resources and Development Commission (No.

(*Footnote 187 continued on page 253*)

perhaps to denote a lesser presumption of guidance according to a preconceived scheme, perhaps to indicate emancipation from the confines of public works. In some instances, promotion and publicity seems to have been the main aim;[188] in others, the idea of unified government organization seems to have been an important motivating force.[189] Sometimes the pristine notion of planning has been modified or re-directed.[190]

It may be concluded that the question of just what to do with, and exactly how to organize, the planning function is in a state of flux. But that the desirability of planning, in some form or fashion, has taken hold is further suggested by the multitude of recent enactments providing plans for the postwar period. These have materialized in all parts of the country. Usually they either emphasize or relate exclusively to conventional public works; and while some of them patently represent no more than a bowing to the circumstances of war-caused shortages, others just as patently reflect the desire for rational foresight that is the touchstone of planning. They are too numerous to mention individually here. Suffice it to say that they range all the way from modest authorizations to counties to build up funds for postwar road construction, to such measures as the Washington act setting aside $50,000,000 for state works, and $20,000,000 for county and municipal works of all sorts (buildings, forests, reclamation, airports, and what not), and establishing a State Development Board to conduct the necessary research and give overall guidance to the activity.[191]

A development related to planning has been the creation of research bodies to conduct studies leading to the advancement of the states' economy and the increased utilization of the states' resources. Three of these are: the Minnesota Institute of Research; the North Dakota Research Foundation; and the Colorado Industrial Development Research Fund.[192]

Planning of the prewar style was given further impetus in Virginia, where regional planning commissions were authorized; and in Michigan, where (a) the State Planning Commission was enlarged and its duties expanded, (b) regional planning commissions under the auspices of the state body were authorized, and (c) the statute relating to county planning was rewritten.[193] The apparent effect of the Michigan legislation is to allow planning a broader approach.

In the related field of zoning, the principal statutory advances of interest have been (a) war-emergency acts designed to deal with situations arising around defense plants and military installations, and (b) airport zoning en-

(*Footnote 187 continued from page 252*)

138, Acts 1945). Vermont, the Development Commission (ch. 5, Acts 1945). Washington, the Division of Progress and Industry Development (ch. 173, Laws 1945). Missouri, the Department of Resources and Development (pp. 978-984, Laws 1943). Georgia, the Agricultural and Industrial Development Commission (No. 374, Acts 1943). Florida, State Improvement Commission (as amended by ch. 22821, Laws 1945). New Jersey, Department of Economic Development (ch. 85, Laws 1944).

188 As Vermont, above cited; Iowa, ch. 63, Laws 1945; West Virginia, ch. 124, Laws 1945.

189 As Arkansas and South Carolina, above cited.

190 For example, Georgia as above cited, in conjunction with No. 27, Acts 1943, (abolishing State Planning Board). In some instances, the planning idea has been supplemented, as: Mississippi, ch. 241, Laws 1944; and Minnesota, ch. 468, Laws 1945, creating a Minnesota Resources Commission.

191 Ch. 255, Laws 1945. This was complemented by another appropriation of $26,000,000 for a postwar highway program (ch. 221, Laws 1945). Other states have also built up huge postwar funds. For example, California is said to have accumulated about $500,000,000.

192 Minnesota, ch. 503, Laws 1943; North Dakota, ch. 197, Laws 1943; and Colorado, ch. 144, Laws 1945. Florida, for its part established an Institute of Government (ch. 23083, Laws 1945); and Delaware, a Legislative Reference Bureau (ch. 296, Laws 1945).

193 Virginia, ch. 50, Acts 1944. Michigan, No. 284, No. 281, and No. 282, Public Acts 1945. In Minnesota, the county planning act of 1941 was extended to counties containing a second class city (ch. 551, Laws 1945).

abling acts. Emergency-induced zoning laws were enacted in a number of states; but how much peacetime carry-over there will be cannot be said as yet. In Nebraska, at least, it is reported that the authorities assume that the end of the war brought an end to zoning under the Nebraska legislation. In any case, however, the zoning involved has been of the "suburban" type, rather than the north-Wisconsin "rural" type.

The alacrity with which the state legislatures have enacted airport-approach zoning enabling acts in the past 4 or 5 years is reminiscent of the early days of the soil conservation district acts. As in that case, the states have had a model to follow, variously revised since its first appearance in 1941. Likewise there has been active interest-group sponsorship working in cooperation with the Council of State Governments.[194] By now, 32 of the states have enacted the enabling legislation, generally applicable to all cities and counties, and patterned in varying degrees upon the model act.[195]

The purpose of such legislation, of course, is to insure unobstructed take-off and landing for airplanes around an airport. The model act: (a) extends the authority to all general political subdivisions; (b) provides for cooperation between two or more units in applying a joint zone plan; (c) permits extraterritorial exercise of the zoning power (as where a city needs to regulate property outside its limits, and the county fails to act); (d) authorizes the integration of airport with other zoning; (e) contains the usual procedural steps, administrative apparatus and enforcement provisions of a normal zoning act; (f) grants, in addition to the traditional provisos on nonconforming uses, authority to remove or obviate nonconformancy through purchase or condemnation.

The outstanding rural zoning legislation, during 1942-45, was enacted by the 1943 Michigan Legislature, in two statutes, applying respectively to counties and to townships.[196] These enactments may be said to culminate a number of years of Michigan experience and experiment with zoning outside city limits. They replace: (a) Act No. 44 of 1935, applying to counties, which in turn had replaced a township act of 1929; and (b) Act No. 302 of 1937, applying at first only to heavily populated townships, but amended by successive legislatures until it was made applicable (in 1941) to all townships with as many as 1500 inhabitants. The 1943 legislation contains no population limitations whatever.

The old Michigan township enabling act was pretty clearly aimed at suburban zoning. Although the same limitation cannot be claimed of the 1935 county act, that act was nevertheless a bit cumbersome, as well as not quite complete in some respects. Moreover, the two basic enabling acts were not drafted together so as to be clearly complementary pieces of one whole. These criticisms cannot be made of the new acts. They were patently conceived together, and in light of a wide experience with zoning practice and zoning problems; they were neatly

[194] The model act was drafted jointly by the Civil Aeronautics Administration and the National Institute of Municipal Law Officers, with aid and comfort from several other national associations. A copy of the latest revision of the Act, together with explanatory materials, may be found in "Suggested State Postwar Legislation," pp. B-75 to B-94 (issued by Council of State Governments, December 1945).

[195] Some of the acts do not follow the model at all, however. As of January 1, 1946, all states except the following had specific airport zoning legislation: California, Colorado, Delaware, Idaho, Kansas, Kentucky, Missouri, Nevada, New Jersey, Ohio, Rhode Island, Virginia, and West Virginia. Georgia, Texas, and South Carolina have special acts applying to one locality each; and the Delaware Legislature has given first approval to a constitutional amendment to authorize zoning laws. See pp. B-78 and B-79 of the above cited publication for a table classifying the states in reference to this matter.

[196] No. 183 (counties), and No. 184 (townships), Public Acts 1943.

drafted in similar (mostly identical) phraseology and follow the same framework; each clearly provides for a comprehensive range of zoning; and their application is integrated by a requirement that township zone plans must secure prior approval from the county zoning committee (or, in its absence, from a special "coordinating zoning committee" appointed by the county board),[197] and by provisions giving township zoning ordinances precedence over county ordinances.

There is space here to make only a few other observations about these two acts. The basic enabling clause (sec. 1) expands the traditional zoning law phraseology to include "agriculture, forestry, recreation, residence, industry, trade, soil conservation, water supply conservation, and additional uses of land,"[198] and employs the activating verb phrase "encourage, regulate or prohibit." Section 3, elaborating the purposes which a zoning plan should aim to achieve, contains the following in addition to the usual wordage: to promote the "use of lands in accordance with their character and adaptability" and "to conserve the expenditure of funds for public improvements and services to conform with the most advantageous uses of lands." Various sections, to be sure, cover adequate planning and preparation, referenda on specific ordinances, emergency interim ordinances without referenda, the continuance of nonconforming uses and the recording thereof, the handling of violations, boards of appeal (or adjustment), necessary financing, the status of preexisting ordinances, and other matters.

Outside Michigan there was not a great deal of activity in zoning of the normal sort. Several states passed special local legislation applying to a heavily populated county;[199] Georgia repealed the enabling act of McIntosh County; and Delaware took the first of two steps necessary to add a comprehensive zoning authorization to its constitution. But Minnesota passed two acts that may help in the attainment of rural zoning objectives. The first of these authorizes the county auditor in zoned counties to sell structures on certain public lands, where they constitute an inducement to trespass, a fire hazard, or a nuisance.[200] The second, which says nothing about zoning and applies only to counties with 150,000 inhabitants and 5,000 square miles of area, empowers the county board to spend up to $25,000 annually to make land purchases and exchanges whenever advisable to avoid unreasonable costs for roads and other objects of public expenditure.[201] In New Hampshire, furthermore, for the first time a procedure for abandoning roads was detailed in statute.[202]

Miscellaneous Control Measures

Usually associated with planning and zoning is the subject of subdivision control. There was not much statutory activity on this during the war years. California consolidated its statutes relating to the survey, mapping, and subdividing of real estate; Maryland prescribed requirements to be met, in most of the state's counties, by subdivision plats submitted for recording; South Dakota extended to lands outside cities the platting requirements of its law; and Rhode Island, not the least of all, enacted a complete subdivision control enabling act, applying to "towns" as well as to

[197] Proposed county zoning ordinances must secure the approval of the State Planning Commission, as in the past.

[198] The township act expressly adds "tents and trailer coaches." Both acts prohibit the regulation of oil and gas wells.

[199] Kentucky, Kansas, Maryland, South Carolina.

[200] Ch. 465, Laws 1945.

[201] Ch. 223, Laws 1945.

[202] Ch. 188, Laws 1945.

municipalities.[203] In a related field, Michigan and Washington authorized the adoption of county building codes; and Colorado took a similar step as to zoned areas outside cities, but excepting farm out-buildings.[204]

Many states enacted legislation providing for the redevelopment of blighted urban areas—a type of measure much sought by city planners. Pennsylvania, however, made the Redevelopment Authority Act it passed applicable to most counties, as well as to cities—with the avowed object of securing the rational remaking of blighted areas, whether improved or unimproved, wherever found. As contemplated by the legislature, such areas will be characterized typically by excessive subdivision or parcellation, and by a confused pattern of multiple ownership.[205]

A policy of stricter regulation of the real estate selling business was inaugurated in Illinois and Michigan where persons engaged in the vocation of selling their own property were brought under the brokers' and salesmen's licensing act.[206] This represents an extension of the domain of control, since realty licensing acts traditionally have been limited to persons who act as selling agents for property belonging to others. New York also made a partial step in closing the gap hitherto existing in such measures by redefining "broker" and "salesman" so as clearly to include persons who are legally "employees" (as distinguished from "agents") of the property owner.[207] Elsewhere, Vermont brought rental activities under the coverage of its licensing act; Nebraska added itself to the list of states having real estate brokers' and salesmen's licensing acts; Iowa revised and recodified its act; Washington amended its act so as to bring it up to recommended standards; and Florida made it easier to revoke the licenses of offending salesmen and brokers.[208]

South Dakota in 1943 passed a law for the control and eradication of noxious weeds and, in 1945, rewrote it in stronger terms.[209] Instead of following the customary practice of listing proscribed weeds by statute, the legislature created a 9-member Weed Board, served by a state weed supervisor as its executive officer, to determine what weeds are noxious and to promulgate regulations for their control. Enforcement of control measures is, however, vested in the state secretary of agriculture, who is empowered to enter and apply essential remedial measures upon the lands of recalcitrant owners, at the cost of the latter, enforceable by a lien against the land (a customary provision). At the local level, counties may levy up to 1-mill tax to finance weed control work.

Both Minnesota and Kansas lengthened the list of weeds declared noxious in their control statutes and otherwise strengthened their weed control procedures.[210] Some of the revisions adopted by Minnesota are especially worth noting. County weed inspectors must now meet qualifications set by the commissioner of agriculture. More authority is given to the county and the county inspector, as

[203] California, ch. 128, Stats. 1943; Maryland, ch. 1016, Laws 1945; South Dakota, ch. 214, Laws 1945; Rhode Island, ch. 1631, Laws 1945. New Mexico (ch. 86 of 1945) and Florida (ch. 22999 of 1945) passed legislation on the vacating of subdivisions.

[204] Michigan, No. 62, Public Acts 1943; Washington, ch. 204, Laws 1943; Colorado, ch. 90, Laws 1945.

[205] No. 385, S.L. 1945.

[206] Illinois, Laws 1945, p. 1206; Michigan, No. 57, Public Acts 1943.

[207] Ch. 588, Laws 1944.

[208] Vermont, No. 168, Acts 1945; Nebraska, ch. 171, Laws 1943; Iowa, ch. 96, Laws 1945; Washington, ch. 111, Laws 1945; Florida, ch. 22861 (No. 347), Laws 1945. Pennsylvania also amended its law in some respects, No. 391, S.L. 1945.

[209] Ch. 312, Laws 1943; ch. 349, Laws 1945.

[210] Minnesota, ch. 534, Laws 1945; Kansas, ch. 3, Laws 1945.

compared with the townships and township inspectors. Failure of any landowner to receive notice to carry out eradication measures will not relieve him of liability to comply with the law. Required methods of control may include "definite systems of tillage, cropping, management and use of livestock"; and a weed is declared noxious if it is injurious to livestock or other property, as well as if it injures roads, crops, or public health.

Further legislation to extend or strengthen weed control and eradication was enacted in Nebraska, North Dakota, and Idaho.[211] One of Nebraska's new provisions empowers the state director of agriculture to organize a bindweed control district in any county in which such a district has not been formed by the first of 1947; and one of the Idaho laws declares that no liability for damages shall be created by entry on private lands to perform authorized weed control measures, even though such entry destroys a crop or temporarily decreases soil fertility.

The principal grazing control activity of the period is represented by legislation in Arizona and Montana.[212] The former made the overstocking of unenclosed land a criminal offense; and declared that the turning out of more livestock than the forage will normally sustain is to be prima facie evidence of intent that such livestock trespass on another's land. The latter, in the course of revising its grazing district law, gave detailed attention to curbing livestock trespasses and to the apportionment of fencing costs. Furthermore, persons who use the range in illegitimate ways are made subject to civil damages as well as to criminal penalties.

Veterans

No discussion of state legislation of the war years would be complete without an allusion to veterans' affairs. Quite generally, the states variously provided for preferences in public employment; accorded indulgences in taxing, educational and licensing requirements; took measures to conserve veterans' property interests; liberalized restrictions on lending institutions with respect to federally-guaranteed loans; brought their World War I laws up to date,[213] as for example, in the matter of tax exemptions; established veterans' counseling services; and the like. But what is conspicuously absent is a rash of homesteading and agricultural settlement schemes. Apparently, the nostalgic and evasive notion that the ex-soldiers' reward should be 40 acres and a mule has gone out of fashion.[214]

The modern scheme, adopted in several states, is a general veterans' loan agency, not limited to settling veterans in agriculture. The Oregon War Veterans' Fund, to assist veterans in purchasing real property, extends only to those who have not received a loan under the federal G.I. Bill. Loans may not exceed $3,000 or 75 percent of the value of the security.[215] The Georgia Veterans Reset-

[211] Nebraska, ch. 7 of 1943, and ch. 2 of 1945; North Dakota, ch. 334, Laws 1945; Idaho, chs. 30, 61, and 168, Laws 1945.

[212] Arizona, ch. 19, Laws 1945; Montana, ch. 199, Laws 1945.

[213] An outstanding act of this kind is ch. 221, Nebraska Laws of 1945, which revives and extends a 1921 law establishing a relief fund for ex-servicemen, termed the Nebraska Veterans' Aid Fund. To finance this fund, the Board of Educational Lands and Funds is directed to purchase and deposit $8,000,000 in bonds, and the Board of Equalization and Assessment is authorized to raise $1,000,000 annually by taxation during the period 1945 to 1950. Another is ch. 191 of the 1943 statutes of California, extending to World War II veterans the benefits of the Farm and Home Purchase Act; and ch. 1046 of the same session, which rewrites this legislation and appropriates $2,000,000 to carry out its purposes. In 1945, the percentage of permissible loan guarantee was raised (ch. 1362, Stats. 1945). In the November election of 1944, moreover, the voters approved a $30,000,000 bond issue to finance the program.

[214] The idea is not, of course, entirely dead. Florida, for example, legislated that veterans might homestead up to 40 acres of "wild and vacant" state land, if the land is officially certified to be "arable and satis-

(*Footnote 214 continued on page 258*)

tlement Corporation, designed to afford assistance in the acquisition of "homes, farms and businesses," is strictly integrated with the G.I. Bill, and extends its aid only to the extent that its loans are guaranteed by the federal government.[216] But Washington's Veterans' Loan Insurance enactment appropriates $5,000,000 to provide for an additional 25 percent of guarantee of loans made under the federal G.I. Bill.[217]

The New Jersey Veterans' Loan Act of 1944, as amended in 1945, is a G.I. Bill in miniature, probably more elaborate than the statutes of other states. Under it, veterans are eligible for loans regardless of whether a client of General Bradley. One odd feature of the New Jersey law is that agricultural pursuits were included within its scope only in a 1945 amendment, as it was originally designed to advance "venture capital, at low rates of interest which may be necessary to establish [veterans] in a business or profession."[218]

Conclusion

The array of enactments here discussed would add up to an impressive total, indeed, had they been concentrated in a few jurisdictions. But when the sum is divided by 48, the quotient has rather less exciting proportions. This quotient is by no means trivial; in many respects, the output of the war legislatures must give comfort to philosophical proponents of better land use.

Gratifying advances have been made, although in the over-all they continue to be halting and spotty. The legislatures are usually disinclined to act until faced with acute or crisis situations. This legislative disposition, however, is probably but the reflection of a national distaste for anticipating trouble and exemplifies the reluctant way in which we accept a profound reorientation in our ideas of public administration and governmental responsibility.

That such a reorientation is under way in the states is unmistakable. States hitherto considered somnolent as to legislation for better land use are clearly showing signs of wakefulness; and, in other states, public consciousness has developed so far that it is rather usual for their legislative assemblies to attend thoughtfully to land resource needs.

If the latest 4-year accretion of land-use legislation is added to what had already been put on the statute books during the past decade, it is patent that this kind of legislation has secured a solid foothold. It is striking that the war did not divert the Legislatures from a better-than-average attention to the perennial problems of land use. It is therefore not unreasonable to hope that by the end of another decade a large portion of the states will have made great strides toward putting their land-use statutes in order.

(*Footnote 224 continued from page 257*)

factory for ordinary cultivation." Ch. 22860 (No. 346), Laws 1945. The Texas Legislature proposed an amendment to the state constitution, to create a Veterans' Land Board financed by a $25,000,000 bond issue, for the purpose of aiding veterans to acquire land. H.J.R. 62 of 1945. (To be voted on, November 1946.)

[215] Ch. 403, Laws 1945.

[216] Act 205, p. 170, Acts of 1945.

[217] Ch. 217, Laws 1945. The total federal and state guarantee may not exceed 75 percent of the loan.

[218] Ch. 126, Laws 1944, as amended by ch. 185, Laws 1945. The amendment also provides that, if a veteran is "otherwise qualified," his lack of suitable training and experience for the occupation for which he wants a loan may be overlooked.

Soldier Settlement in the British Empire

By DOUGLAS G. MARSHALL*

LAND settlement in some form is now an essential part of the rehabilitation program for returning veterans in many sections of the British Empire. This paper is limited to a discussion of the programs of the overseas Dominions in particular since such schemes as were put into operation in the colonies were negligible in comparison with proposals made in the Dominions. Only general material is given concerning returned veterans of this war. This was decided upon for two reasons; first, most proposals have been publicized, and second, many of the schemes are merely in the formative stage. It is too early yet to do other than give merely the legal aspects of present legislation.

It is interesting to note that Christopher Turnor travelled throughout the Empire during and just after the last war to study the various types of legislation and also to "sell" a unified plan for settling Empire veterans and civilians in the various Dominions. From what follows it seems evident that he received little encouragement in his attempt to set up a coordinated Empire plan.[1] Possibly this fact is merely part of the whole historical change of the time, the period when the Dominions began to assert themselves as independent entities within a commonwealth of nations. This transition to independence within the framework of the Empire was not formalized until 1926, the year the Statute of Westminister was enunciated.

It is now proposed to look first at each of the Dominions and then to summarize the experience for comparative purposes.

New Zealand

After the war there were numerous methods by which a veteran could obtain land or capital for improvements on land. Land was obtained for the most part under the Land Act of 1908, the Land for Settlements Act of 1908, and the Discharged Soldiers Settlement Act of 1915 with its subsequent amendments.[2] Under the first two acts the land was disposed of by cash purchase, by occupation with right of purchase, and by renewable lease. Disposal under the last-named Act was by deferred payment, or renewable lease with a purchasing clause. The terms differed somewhat, depending on the type of disposal and the particular act under which the veteran had obtained land. If it were a cash disposal then the initial down payment was one-fifth of the total value, and the balance in 30 days.

If the land was disposed of under the Land Act of 1908, or the Land for Settlements Act of 1908, and occupation with right of purchase was the type of tenure, then the terms were for a period of 25 years. The annual rental was 5 per cent of the capital value of the land. The right of purchase was recognized as the exclusive right of the occupant if he had held the license for a period of six years. If he had not acquired freehold in 25 years he had the right of exclusive lease. For a renewal lease under the Land Act of 1908 the terms were for a period of 26 years. The occupant had the perpetual right of renewal. The ren-

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[1] Christopher Turnor, "Land Settlement for Ex-Service Men in the Overseas Dominions," *Report to the Royal Colonial Institute,* 1920.

[2] New Zealand Year Books, 1921 to 1943, inclusive. Most of the statistics in this section was taken from these year books.

tal was 4 per cent on the capital value of the land and the occupant also had the right to freehold.

Under the Land for Settlement Act of 1908 the terms of renewable lease were for a period of 33 years. The occupant had the perpetual right of renewal. The rate of rental was 4½ per cent on the capital value of the land. The occupant also had the right of purchase and this arrangement could be made on a deferred basis if desired.

Some soldiers obtained land under the Special Tenures Acts of 1915. The cash terms were similar to the cash terms of the Acts of 1908. Terms could be arranged on a deferred basis under this Act. The period for such arrangement was usually 19 years. The initial payment was 5 per cent of the value of the land to be paid in cash and the balance in equal annual payments together with 5 per cent interest payable semi-annually on the balance.

A renewable lease arrangement was possible under the Special Tenures Act. The terms were for a period up to 33 years on settlement land and 66 years on Crown lands with right to perpetual lease on either type of land. The occupant had, as under the other acts, the right to freehold. Table I shows the summary of disposition and terms under the various acts.

The disposition of land to veterans under these acts dealt with Crown lands or land specially designated by the acts. However, a veteran could also obtain private land by having the Land Board purchase the land for him. There were Land Boards in each land district composed of two farmers elected locally and two members appointed by the Land Department, with the land commissioner as chairman. Their function was to select candidates for the different settlements and to offer advice and to buy land for returning veterans. After the Board made the purchase the disposal was made under specified terms, such as deferred payment or renewable lease with a purchasing clause.

TABLE I. DISPOSITION AND TERMS FOR ACQUISITION OF LAND FOR RETURNING VETERANS OF WORLD WAR I: NEW ZEALAND

Land Disposal and Terms*	Land Act of 1908	Land for Settlements Act of 1908	Discharged Soldiers Settlement Acts	Special Tenures Acts of 1915
(1) Cash Disposal	initial down payment 1/5 of total value and balance in 30 days	Same	Same	Same
(2) Occupation with right of purchase	terms for 25 years, annual rental 5% of value; could purchase after 6 yrs., after 25 yrs., could lease if he didn't buy	Same	No provision in this act	terms for 19 years; initial payment 5% of value, balance in equal annual payments with interest payable semi-annually at 5%
(3) Renewable lease	terms for 26 yrs. perpetual right of renewal; annual rental 4% of value; right of freehold	terms for 33 years perpetual right of renewal; rental 4¼ percent of value; right of purchase	No provision in this act	terms for 33 years on settlement land and 66 years on crown lands; right of perpetual lease, right of freehold; annual rental apparently flexible

* Does not include private land disposed of by the Land Board.

The total number of veterans who applied for land from 1915 to 1943 was 15,181 and the number accepted was 4,112. Apparently New Zealand screened the applicants carefully since only 27.1% were given allotments.[3] Provisions could also be made by a veteran to have the Land Board build dwellings which could be sold on a credit basis to the settler. Under all the acts, no transfers of the land could be made for a period of at least 10 years. Financial assistance was also given for purchase of land and equipment, for reassigning a lease, and for meeting mortgage obligations. A maximum of £2,500 could be applied to the land and £750 could be obtained for stock, equipment, etc. Repayment was a flat mortgage for 10 years at 5 per cent, or an installment mortgage over 36½ years at 6 per cent. Up to £1,000 could be borrowed for the purchase of a dwelling, or £900 for the erection of a dwelling to be repayed as a flat mortgage as described above, or an installment mortgage for 25½ years at 7 per cent.

In addition, the veterans could borrow up to £500 for fencing, drainage and other improvements. The terms were 5 per cent for a period to be arranged for by the Board.

Total figures are available only for the Discharged Soldiers Settlement Act of 1915. A total of 1,456,024 acres had been disposed of up to the end of 1942. Loans totalling £23,403,628 had been granted to 22,740 discharged veterans up to June 30, 1932. Of this amount £10,451,618 had been repayed by March 31, 1932. One could conclude that up to March 1932 it had cost the New Zealand government at least 10 million pounds to establish its returning veterans on land. This of course is not counting the costs involved in the other two acts.

No one can deny that New Zealand offered liberal financial aid and adequate holdings of land under what appeared to be sound principles of credit. But, as Black and Hyson have stated, "those in charge have apparently had no desire to supply posterity with a record that all might read."[4] It seems almost impossible to get anyone with authority to give an unbiased picture in either New Zealand or, for that matter, in any other Dominion. Some of the reasons for the failure of veterans in the New Zealand scheme have been suggested privately to this writer. Among these are: the reoccurrence of disabilities, the poor type of land, the over-generosity in a financial sense, the lack of adequate trained personnel for administration, and finally, the lack of practical farming experience on the part of the veteran.

Australia

From the references available it seems that the settlement of returned soldiers was left largely to the various states in Australia although the Commonwealth had undertaken to lend money to the states up to £1,000 per settler and to bear half the losses sustained by the states.[5] The federal government offered mainly encouragement and technical advice.

In New South Wales, 9,755,264 acres had been set aside for soldiers up to July 1, 1940. Of the total, 1,710,272 acres were purchased for £8,113,956. Thus slightly over 17 per cent of the land set aside had been purchased out-

[3] Enclosure to dispatch No. 711, dated August 2, 1943, from the American legation, Wellington, New Zealand, on the subject: "Annual Report on Settlement of Crown Lands for the Year Ended March 31, 1943; Post-War Prospects."

[4] John D. Black *and* Charles D. Hyson, "Postwar Soldier Settlement," *The Quarterly Journal of Economics*, p. 8, November 1944.

[5] Official Year Books of Australia, Nos. 13, 18 and 34; and "Settlement and Employment of Returned Men on the Land," *Second Report*, The Rural Reconstruction Commission, January 18, 1944, p. 5.

right by the soldier settlers. The total settlers numbered 9,704 at the peak; but by July 1, 1940 only 4,622 remained. Therefore, approximately 48 per cent of the original settlers were still on the land. Further, this 48 per cent now occupy 6,849,914 acres or slightly over 70 per cent of the total set aside. This is not to say that at any time the settlers occupied all the land but that they now merely occupy 70 per cent of the maximum amount originally set aside.

The state of Victoria had 2,482,286 acres set aside for returning soldiers up to July 1, 1938. Of this amount, 1,763,241 acres, or 71 per cent, has been bought at a cost of £13,361,266 by the settlers. The peak number of settlers was 12,126. On June 30, 1938, assuming one settler to a farm, there were 8,426 settlers or nearly 70 per cent of the peak number still on the farms alloted.

The only statistics available for Queensland were up to July 1, 1929. At that time 577,633 acres had been set aside of which 41,101 acres, or only 7 per cent, were purchased at a cost of £270,480. By July 1, 1940, South Australia had set aside an area of 1,336,612 acres of which 1,202,653 acres or nearly 90 per cent had been purchased at a cost of £3,863,572.

Western Australia, the largest state, had set aside an area of 14,287,643 acres of which only 2 per cent or 345,110 acres were purchased at a cost of £605,076. Assistance was given 5,213 soldiers. Only 1,704 soldiers or 32 per cent of those given land or loans were still holding farms or loans on June 30, 1940. The total amount loaned to that date was £6,737,693.

By June 30, 1940 Tasmania had set aside an area of 342,405 acres of which 273,040 acres or nearly 80 per cent was purchased at a cost of £2,072,298. Up to the above date 2,380 veterans were granted farms, loans, mortgages, or assistance of some type.

After the last war, nearly 29 million acres were set aside by all the states of Australia for veterans, of which some 17 per cent was purchased by the veterans at a cost of over 28 million pounds. A report issued in 1929 by an investigating commission assessed the total losses to the Commonwealth of Australia to be £23,525,522, or approximately 100 million dollars. As of 1929, approximately 71 per cent of the original settlers still remained on the land. The greatest turnover was in Tasmania where only 39 per cent of the settlers were still on the land even as early as 1929.

The reasons for failure of individual soldier settlers in Australia were numerous and complex. Here are some of the more important. Many of the men were skillful farm workers but incompetent managers. As was natural, they chose to be managers at state expense rather than to accept the low wages of a farmhand. The evidence from the report makes it quite clear that many failures in the scheme were caused by inexperience and general unsuitability for farm work.[6]

Overcapitalization in land and equipment together with high interest rates were also important factors. Poor soil, inadequate farm size, and lack of guidance and supervision were contributing causes in the failure of many settlers.

Union of South Africa

South Africa appears to have absorbed veterans interested in land settlement in her already existing land settlement schemes. The writer has been unable to find any material which separately

[6] *Ibid.* The reasons for failure are fully discussed in the Report.

treats the veterans from others who settled on land.

Canada

Several provinces in Canada began as early as 1916 to prepare for the return of their soldiers but for a number of reasons it was decided to institute a federal plan which would include the provincial schemes that had been previously set up.[7] For one thing, it was thought that a federal plan would give uniformity in the treatment of the veterans which could not be achieved under several provincial plans. Secondly, the men had served the country as a whole rather than one particular province. Therefore, recognition for this service should be based on national interest. Finally, the three western provinces had no public land of any extent so any land given for settlement purposes in the Prairie provinces would have to made by the federal government. On these bases it was decided that the federal government would be responsible for the settlement of soldiers.

In 1917 the Act setting up the Soldier's Land Settlement Board (consisting of three commissioners) was passed by Parliament and the functioning of the Act was placed under its control.

The soldiers were entitled to a grant of 160 acres, plus a loan up to $2,500 for buildings, equipment and other expenses payable at 5% interest over a 20-year period. The loan was the only part which was actually a concession since any settler, soldier or otherwise, could obtain the grant of land as a homestead. Since such a scheme was wholly to the advantage of the Prairie provinces and made no provisions for settlement in the other provinces, important amendments were made to the 1917 Act.

Authority was granted to the Board to purchase land, in an amount not to exceed 320 acres, from private owners and to sell it to soldier settlers. Loans could be granted to eligible soldier settlers who could pay at least one-tenth of the purchase price of the land and who had enough capital to supply his family needs until the next harvest. The loans that could be granted were divided into the three following categories:

1. Eligible settlers buying farms through the Board:
   (a) a maximum of $4,500 for purchase of land,
   (b) a maximum of $2,000 for the purchase of stock and equipment,
   (c) a maximum of $1,000 for buildings and improvements.
2. Eligible settlers on federal land in western provinces:
   A maximum of $3,000 for purchase of livestock, equipment, buildings and other improvements. The total advanced was conditioned by the collateral the settler could furnish.
3. Eligible settlers already possessing land:
   (a) a maximum of $3,500 for the payment of mortgages, but the sum could in no instance exceed half the estimated value of the farm,
   (b) a maximum of $2,000 for the purchase of livestock and equipment,
   (c) a maximum of $1,000 for the buildings and other improvements. The maximum that could be borrowed by eligible settlers possessing land could not exceed $5,000.

The Board decided against the plan of going out and buying large numbers of farms but rather encouraged the veteran or his representative to choose his own farm. The Board acted as his agent, charged him the cost price, and allowed him to take possession when he had paid at least 10 per cent of the sale price. The Board also had the power to seize

[7] "Land Settlement in Canada," *International Review of Agricultural Economics*, January-March, 1926. A detailed and full account of the Canadian picture is found in this article. See especially pp. 16-21.

any land that was being withheld from the market and not being used for productive purposes or being put on the market at an unreasonable price. In order to achieve a coordinated program, district offices were established in nearly all provinces.

On March 31, 1943, there were 7,360 of the original 24,793 soldier settlers of World War I still on the land, approximately 30 per cent.[8] Of course, a number had gone into other occupations or acquired other farms. Nevertheless, this is a high rate of turnover and can be attributed to a number of things. The inflationary period immediately after the war, coupled with the subsequent depression, was no respecter of either veteran or non-veteran farmers. Both suffered the consequences of high-priced land and equipment to be paid with 30-cent wheat. Failures unique to veterans can be more specifically attributed to poor supervision, lack of an adequately trained staff within the administration, selection of poor farms, reappearance of war disabilities, lack of aptitude and experience and the granting of too large a loan with too little security.[9]

It has probably cost the Canadian people at least 25 million dollars, if we consider the investment of $109,000,000 plus an additional $11,000,000 for operating expenses and unpaid interest. To offset this there have been recoveries amounting to $76,000,000 and accounts valued at $20,000,000.[10]

Such was the story of soldier settlement after the last war. To ask whether the venture was successful is to ask a rhetorical question. The answer ranges from a resounding "no" to a dog-in-the-manger "yes," depending on whether the query is put to a disillusioned veteran or to a salaried official of the Board. The most surprising thing is the absolute dearth of written reports particularly for public consumption.

Great Britain

Great Britain provided a limited number of small holdings for returned veterans under the Land Settlement Act of 1919 and set up a fund of 20 million pounds. Approximately 254,000 acres were acquired and some 16,740 holdings were created.[11] By 1926, at which time a final settlement was made, 24,319 men had been settled, of which 18,915 or 77.8% still remained on the settlement land. This figure compares favorably with the Canadian figure for the same period. The percentage of failures has been estimated at not more than 15 per cent since a number of the original settlers have acquired other holdings. The original capital outlay has been written off in order that the rents could constitute an economic return on the remainder of the expenditure. In most instances, the venture may be considered a morally acceptable type of dole allowing the veterans a breathing period in which to readjust themselves to the civilian economy.

To summarize, the overall cost of settling veterans on land in the three overseas Dominions (New Zealand, Australia, Canada) and in Great Britain has been conservatively estimated at $375,000,000. Over 75,000 veterans were given aid in some form. About the only thing common to all the plans was the liberal amount of money granted and too often with too little security. Turmor's effort to make the settlement schemes an Empire Plan came to naught since individual nationalism was stronger than the ap-

[8] *The Canada Year Book, 1943-44,* p. 771.

[9] Douglas G. Marshall, "Soldier Settlement in Agriculture," *Journal of Land & Public Utility Economics,* August 1944, pp. 270-278; John D. Black *and* Charles D. Hyson, *op. cit.,* pp. 4-9.

[10] John D. Black *and* Charles D. Hyson, *ibid,* p. 7.

[11] Lord Ernle, *English Farming Past and Present,* (London, New York: Longmans, Green, and Co.,) fifth edition, 1936, pp. 425 and 426.

peal to Empire solidarity. Over-generosity was the keynote, but all in all, valuable experience was gained. More recognition of this experience could be emphasized in this country than has been displayed to date. The effort put forth in the United States after the last war was small in comparison with that of even her next-door neighbor, Canada. Sound policy usually develops only out of past experience. Nor does this experience have to be favorable or "home-grown."

New Zealand has lowered the maximum amount to be loaned to $2,000 for veterans of World War II. In addition she has provided a flexible rate of interest and emphasized training as an essential prerequisite for receiving aid.

Canada likewise lowered the amount to $6,000 and writes off 1/3 of the cost of the land, improvements, and building materials. Payments can be waived for the first five years but the debt must be amortized in 25 years. The interest charge has been lowered to 3½ per cent per annum. Training in agriculture is particularly emphasized. Legislatively the provisions seem sound and are based on the experiences of the last war. Provisions for part-time farming have been made this time. Whether the execution of the program is sound and also based on the previous experience remains to be seen. To conclude, the Dominions seem to be away to a worth-while start and the next few years should tell an interesting story.

Who Will Pay for the Central Valley Project of California?

By ARTHUR D. ANGEL*

ONE of the most perplexing legacies that Secretary of the Interior Julius A. Krug has inherited from Harold L. Ickes is the knotty problem of allocating costs of the Central Valley Project of California, various administrative aspects of which have been examined in previous issues of this *Journal*.[1]

As it is now authorized, this Project is but the initial functional unit of the Bureau of Reclamation's regional program for supplying water to irrigate some 9,000,000 acres of land in California's fertile but dry interior valley, and for generating power to meet the needs of growing industries on the Pacific Coast.[2] Consequently, the manner in which Secretary Krug allocates the present Project's construction costs may, in no small measure, determine when and how the Bureau's larger regional program will be undertaken. In solving this problem, legal restrictions and practical politics may require Secretary Krug to cast scientific methods of cost allocation to the winds, and to act upon the basis of political expediency.[3]

Allocation Requirements under Existing Law

When he authorized the Project under the Emergency Relief Appropriation Act of 1935, President Franklin D. Roosevelt declared that the works for irrigation and reclamation should be reimbursable in accordance with the Reclamation Act of 1902, as amended.[4]

In desperate fear of losing their farms for want of a supplementary water supply, San Joaquin farmers would, before work began on the construction of the CVP, have cheerfully signed water sales contracts of the type which some irrigation districts are now refusing to sign.[5] Most of their irrigation was accomplished by pumping water from subterranean sources—then rapidly failing after years of overdraft and subnormal replenishment from precipitation. Moreover, thousands of acres of improved lands were reverting to desert due to the increasing costs of pumping. Secretary Ickes could and should have negotiated water sales contracts at that time.

There are numerous reasons for Secretary Ickes' failure to secure water repayment contracts which can not be adequately analyzed in a cursory survey. It may suffice, however, to call attention

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[1] M. R. Goodall, "Land and Power Administration of the Central Valley Project," *Journal of Land & Public Utility Economics*, August 1942, pp. 299-311; A. D. Angel, "Wanted: One Responsible Administration for the Greater Central Valley Project of California," *ibid.*, May 1945, pp. 136-143.

[2] Department of Interior, *Comprehensive Plan for Water Resources Development, Central Valley Basin, California*, November 1945.

[3] M. G. Glaeser has shown that politics, rather than scientific methods of cost allocation, were also the dominant factor in allocating the costs of T. V. A.; see Glaeser, "Those T. V. A. Costs," *Public Utilities Fortnightly*, August 31, 1939, pp. 259-269.

[4] Water Project Authority of the State of California, *Booklet of Information for Conference between the United States Department of Interior and Water Project Authority of the State of California*, August 28, 1940, Sec. I, pp. 11, f.

[5] Before a Senate committee a spokesman for Kern County Land Co., made, on June 5, 1944, the following statement: "I have been asked to appear before your committee as a representative of all irrigation interests of the Kern River in the San Joaquin Valley. . . . I may even say that we have refused and will continue to refuse to participate in the [Kern River] project if it is assigned to them [the Bureau of Reclamation]." Senate, Sub-Committee of the Committee on Commerce, *Hearings on H. R. 4485*, 78th Cong., 2d sess., 1944, p. 319. Speaking for the Kings River Water Association, composed of eight irrigation districts in the region, C. L. Kaupe made, before the same committee, statements to the effect that his districts refused to deal with the Bureau of Reclamation. *Ibid.*, pp. 301, 303, 363.

to one of them, which may be introduced briefly: There was an absence of federal statutory standards prescribing the procedure for allocating the costs of multiple-purpose projects in which the federal government claimed navigation and flood control interests.

Rivers and Harbors Act of 1937. By an Act of August 26, 1937, Congress specifically re-authorized the Central Valley Project, but did nothing to clarify the Secretary of the Interior's cost allocation problem. While transferring the War Department's $12,000,000 interest in Shasta Dam to the Department of the Interior and declaring that amount non-reimbursable, Congress still failed to indicate how much more might be allocated to the non-reimbursable function of navigation. Nor did it establish appropriate standards for allocating other costs to flood control, salinity repulsion, and other functions not provided for under the reclamation law. By specifying how the Project must be operated, Congress did, in fact, make the Secretary's cost allocation problem more difficult:

> "Said dam and reservoir shall be used, first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses; and third for power."[6]

In short, the Secretary of the Interior was thereby required to operate Shasta Dam first for the non-revenue-producing functions of the Project. Moreover, the one function, power generation, which could more than repay the government's investment in power facilities, was to be operated under the handicap of producing benefits for which the Secretary would have no small measure of difficulty in collecting costs.

Reclamation Project Act of 1939. At last Congress, in 1939, under the Reclamation Project Act of that year provided general standards to guide the Secretary of the Interior in making allocations of the costs of multiple-purpose projects constructed under the reclamation law. Section 9 (a) of that Act provided:

> "No expenditures for the construction of any new project, or new supplemental works on a project shall be made . . . by the Secretary until he has made an investigation thereof and has submitted to the President and to Congress his report and findings on
>
> (1) the engineering feasibility of the proposed construction;
> (2) the estimated cost of the proposed construction;
> (3) the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;
> (4) the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;
> (5) the part of the estimated cost which can properly be allocated to miscellaneous purposes and probably be returned to the United States."[7]

A larger allocation of cost to flood control and navigation than that specifically designated as non-reimbursable under the Rivers and Harbors Act of August 26, 1937 also appeared to be permissible under Section 9 (b) of the Reclamation Project Act of 1939, which provided:

> "In connection with the making of such an allocation, the Secretary [of the Interior] shall consult with the Chief of the Engineers and the Secretary of War, and may perform any of the necessary investigations or studies under a cooperative agreement with the Secretary of War. In the event of such an allocation, the Secretary of the Interior shall operate the project for the purposes of flood control or navigation, to the extent justified by said allocation therefor."[8]

[6] 50 *Stat.*, 850.

[7] 53 *Stat.*, 1198.

[8] 53 *Stat.*, 1194.

Before Secretary Ickes decided how much non-reimbursable costs should come from the pockets of federal taxpayers, for their interest in subsidizing "cheap" transportation on the Sacramento River and providing "flood control" for California farmers, the impact of war required immediate construction of certain power facilities in order to supply expanding war industrial demands for electric power in Northern California.[9] Meantime Secretary Ickes could not give San Joaquin irrigationists the slightest idea when they would get water from the Project, or how much they would have to pay for it.

Federal-State Studies on Cost Allocation

Not until there was, in the San Joaquin Valley, a movement to put the War Department into the irrigation business, under the pretense of providing flood control, did Secretary Ickes initiate, in accordance with Section 9 (b) of the Reclamation Project Act, the Central Valley Project Studies. Coordinated under the direction of a special consultant to the Bureau of Reclamation, twenty-four committees composed of representatives from more than seventy federal and state agencies, proceeded to examine all of the details of the Central Valley Project, including six problems pertaining to cost allocations. These were:

Problem No. 8. What allocations of Project costs should be made to irrigation?

Problem No. 9. What allocations of costs should be made respectively to navigation, flood control, salinity repulsion and national security?

Problem No. 10. What means exist or can be created for obtaining equitable payments toward the costs of the Project from beneficiaries of salinity control? What amount should be paid by such beneficiaries?

Problem No. 11. What amount should be assigned to recreational facilities and opportunities that will be created by the Project, as a contribution to its costs?

Problem No. 12. What practical means exists, or what means can be established to secure equitable payments toward the cost of the Project from business, industrial and other enterprises benefited indirectly by the Project?

Problem No. 13. What legislative measures are needed to make effective the allocations to non-reimbursable items?[10]

Committee studies on problems eight and nine were not actuated until 1944, when alternate sources of revenue were assessed by other study committees. Nor were the fruits of their labors ready for publication before Commissioner H. W. Bashore and Secretary Harold L. Ickes resigned.

Cost of Salinity Repulsion. After estimating that 3,300 second-feet of water must pass through Carquinez Strait at all times in order to repel salt water penetration into the Delta lands, the salinity sub-committee on problems eight and nine found no legal means of collecting the costs of this water from the Delta farmers. Since it would be necessary to pass 5,000 second-feet of water through the channel in order to promote navigation on the Sacramento River, the beneficiaries of salinity repulsion would get their benefit indirectly. No more costs could be collected from them than from the beneficiaries of navigation, who might eventually decide to operate river boats on the Sacramento River. This committee did, however, believe that the Delta farmers should be required to pay $200,000 annually for the benefits of salinity repulsion.

Social Benefit Arbitrarily Assumed. The committee on problem eleven re-

[9] Senate, Sub-Committee of the Committee on Appropriations, *Hearings on Interior Department Appropriation Bill for 1944*, 78th Cong., 1st sess. (1943) pp. 548, ff.

[10] Bureau of Reclamation, Press Release, December 2, 1942.

ported that the federal government would have to spend additional money if the reservoirs created by Friant and Shasta Dams were to be converted into recreational areas. This committee, moreover, admitted frankly that no positive amount could be credited to recreational features, except by arbitrarily assuming a social net benefit greater than the required additional expenditures. The amount arbitrarily assumed, as indicated in the following table, was determined to be $77,281.70.

Benefits Accruing to Entire Valley. The aggregate amount of payments that should be obtained from indirect local beneficiaries, including business and industrial enterprises, the Problem Twelve Committee reported, is twenty-five per cent of the aggregate amount of payments by all users of water from the Project. While this committee believed that the most equitable means of obtaining such money would be by a uniform tax levied on the assessed value of all land in the entire Central Valley, it recognized that the Department of the Interior has no power to tax the people of California. Since property owners of the Central Valley are no more likely to pass state legislation to tax themselves for a benefit they can get free from the federal treasury than the beneficiaries of salinity repulsion in the Delta are, the Problem Twelve Committee recommended allocating this cost to power.

Generous Allocation to Flood Control Recommended. Meantime, Congress by passing the Flood Control Act of 1944 authorized the War Department to construct competing dams on the Kings, Kawea, Tule, and Kern Rivers, which are not tributaries of a navigable stream. All of these have interior drainage and, due to their seasonal flow and precipitous drop, were not used for navigation even by the aboriginal inhabitants of the San Joaquin Valley. Since these so-called flood control dams would replenish many of the same subterranean reservoirs that the Bureau of Reclamation's Friant-Kern Canal is designed to serve, it is probable that Secretary Krug will be required to sell Project water at ridiculously low prices.[11] Thus the Problem Eight and Nine Committee[12] was forced to make a generous allocation for flood control benefits.

Estimates for determining the allocation to flood control were predicated upon the postulate that federal taxpayers should stand the loss to property damage and also pay for the benefits that the private owners will receive from improved alternate uses of their property.

ALLOCATIONS RECOMMENDED BY COMMITTEE ON PROBLEMS EIGHT AND NINE[13]

		TOTALS
Navigation:		
For direct benefits	$ 12,454,000	
For elimination of salt water barrier	5,630,000	
Total (non-reimbursable)		$ 18,084,000
Flood Control (non-reimbursable)		31,444,000
Irrigation		
General water supply	$103,731,000	
Contra Costa Distribution System	3,768,000	
Canal capacity for future water	13,827,000	
Total (reimbursable, interest-free)		121,326,000
Municipal and Industrial Water: (reimbursable, interest-bearing)		12,413,000
Commercial Power:		
Power service (interest-bearing)	$102,412,000	
Power assistance to interest-free functions	74,370,000	
Total (reimbursable)		176,782,000
National Security:		
Increased costs	$ 198,000	
Loss in power revenue	4,264,000	
Total (non-reimbursable)		4,462,000
TOTAL COST OF AUTHORIZED FEATURES		$364,511,000

[11] According to a press release by the Second Regional Headquarters of the Bureau of Reclamation dated June 5, 1946, the Bureau was offering to sell Friant water at rates ranging from ten cents to $1.25 per acre-foot, depending upon snowmelt and dependability of supply.

[12] This Committee was composed of representatives of the Bureau of Agricultural Economics, Soil Conserva-

(*Footnote 12 and 13 continued on page 270*)

By capitalizing the average annual losses due to flood damage, and benefits resulting from change in land use which accrue to the owners of the land, the committee estimated the total benefits to flood control at $31,444,000. It reasoned that, in the face of rising prices, the estimated costs of alternate structures was greater, therefore the total amount was a justifiable expenditure.

The committee did not consider as an alternate justifiable expenditure the cost of flood damage insurance which farmers who purchase land subject to floods would have to pay to a private insurance company. The justifiable amortization periods for the committee's calculations, shown in the table, were taken as one hundred years for flood control and fifty years for navigation.

Suggested Allocation of Cost to Navigation is Large. As the table summarizing the committee's recommendations for an allocation shows, the navigation item was composed of two parts:

The first was the capitalized, estimated annual cost of an alternative system of locks and dams amounting to $12,300,000—plus $154,000, the capitalized reduction in annual maintenance dredging costs. This reduction in maintenance cost, it was contended, would obviate the necessity for constructing a system of locks and dams. Thus the sum of $12,454,000 was suggested as an allocation for these benefits.

The second item allocated to navigation represents that part of the cost of salinity repulsion which is not shoved onto commercial power. The committee reasoned that this amount could be charged to navigation, since Congress has authorized $5,630,000 for a system of locks and dams, the construction of which will not be required, due to the operation of Shasta Dam.[14]

As an alternate justifiable expenditure the committee did not consider the possibility of employing a single Southern Pacific freight train, which could, if operated daily, haul more freight than has passed on the Sacramento River, between the city of Sacramento to the metropolitan area of San Francisco, even during the war years.

Items of Irrigation Costs. Three items under irrigation were designated as being reimbursable from irrigation revenues, when and if the Bureau of Reclamation is able to secure water sales contracts.[15]

The allocation to general water supply was estimated as the amount remaining for repayment after all other allocations were established. This would include only power facilities actually used in pumping irrigation water, none of the costs of Shasta Dam, and less than half the costs of Friant Dam. Such an allocation, the committee maintained, could be met on the customary forty-year, interest-free basis, with revenues approximating seventy per cent of the lowest of several estimates that the irrigationists could pay.

The committee did not consider as an alternate justifiable cost the average cost per acre-foot of water that irriga-

(Footnote 12 and 13 continued from page 269)

tion Service, Federal Power Commission, Power Division of the Department of Interior, War Department Corps of Engineers, and the following state agencies: Water Project Authority, California Railroad Commission, Dept. of Natural Resources, University of California, and Stanford University.

[13] From Summary of *Report on Problems 8 and 9.*

[14] In 1929 the State Division of Water Resources reported that a salt water barrier was impractical. Calif. State Dept. of Public Works, "Report on Salt Water Barrier below Confluence of Sacramento and San Joaquin Rivers," *Bulletin No. 22,* 1929.

[15] On May 22, 1946, the Bureau of Reclamation announced that Regional Director Richard L. Boke had succeeded in negotiating a water sale contract with Lindsay-Strathmore Irrigation District for 30,000 acre-feet of first class water at $1.25 an acre-foot. Only one other such contract, that with the Southern San Joaquin Municipal Utility District, had been negotiated. Press Release, May 22, 1946.

tionists are now having to pay by virtue of increasing expenditures for deep-well pumps and high-cost electric pumping charges.[16]

The suggested allocation to the cost of the Contra Costa Distribution System was the actual cost of that system, which it was presumed the farmers of the Delta would be more willing to pay than they are to reimburse the United States for their salinity repulsion benefits.

The suggested allocation to canal capacity reserved for future water, or water in addition to that available from Shasta Reservoir, was made on the basis of proportionate use of the canal capacities involved.

Had the proportionate use theory been followed in connection with the allocation of costs involved in Shasta and Friant Dams, the irrigationists probably would not today be inflating the market value of their land in the San Joaquin Valley.

Cost of Municipal and Industrial Water. An allocation to municipal and industrial water supply was proposed, equal to the amount which the committee estimated can be repaid by the water users with a rate of ten dollars per acre-foot. This rate was established upon the basis of justifiable alternate expenditures. Interest payments of three per cent per year on this allocation, with amortization of the allocation to each water sales contract in forty years, were assumed in the calculations.

Commercial Power to Carry Large Share of Shasta Dam. If the amount which this committee assigned for repayment from commercial power revenues should be allocated to power, the consumers of electric power in Central California will be fleeced to subsidize agriculture. But they will not be, because Pacific Gas and Electric Company, which is the only large outlet for the sale of the Project's commercial power, can hardly be expected to pay such costs.

It should be noted in the table above that $74,370,000 represents the major cost of Shasta Dam.[17] The committee first computed the actual costs of power facilities assignable to commercial power upon an interest-bearing basis, with amortization in fifty years. Then, by a curious line of reasoning, it recommended assigning to power all of the costs of salinity repulsion above the $200,000 annual payment which the beneficiaries "ought to pay," plus the $5,630,000 chargeable to navigation. This amount of benefit, an indirect subsidy to the corporate farmers of the Delta, amounts to $8,000,000.

Power Rates Can Not Provide Suggested Subsidies to Agriculturalists. The commercial power item titled "assistance to other functions" also included "indirect irrigation benefits." This included twenty-five per cent of the aggregate amount of payments, by all water users, which the Committee on Problem Twelve recommended collecting by a general tax on all property within the entire Central Valley; but which it suggested could be collected from commercial power sales.

Secretary of the Interior Krug can not be expected to market Central Valley Project power at a higher rate than 1.5

[16] In the San Joaquin, in 1930, the pumping costs for supplying each acre of land with 2.5 acre-feet of water were as follows: 100 ft. pumping lift, $16.40; 150 ft. pumping lift, $22.00; 200 ft. pumping lift, $29.00; 250 ft. pumping lift, $35.00, where a quantity of 75 acre-feet was pumped. Where the quantity pumped was 150 acre-feet, the cost was slightly lower per acre foot of water. Div. of Water Resources, "Permissible Annual Charges for Irrigation Water in the Upper San Joaquin Valley," *Bulletin No. 34*, Sacramento, 1930, p. 64.

[17] The total cost of Shasta Dam was estimated by the Bureau of Reclamation, in June 1943, at $109,598,500, and at that time the estimated cost of Friant Dam, $19,635,500, was listed as irrigation cost. Senate, Sub-Committee of the Committee on Appropriations, *Hearings on Interior Department Appropriation Bill for 1944*, 78th Con., 1st sess., p. 686.

mills per kilowatt-hour, which is the energy rate that Pacific Gas and Electric Company is now paying under a temporary wartime contract for the entire output of the first two 75,000 k.v.a. generators installed at Shasta Power Plant.[18]

If the entire output of the Shasta and Keswick plants, which will have an ultimate installed capacity of 450,000 k.v.a., were sold at 1.5 mills, commercial power would not reimburse the government for funds actually expended for power facilities[19] plus this $74,370,000 subsidy to the agriculturalists. Moreover, this amount of firm power—power for which a continuous supply can be guaranteed —can not be marketed and for a very obvious reason: Shasta Dam must be operated "first, for river regulation, improvement of navigation, and flood control; second, for irrigation and domestic uses." Both of these functions require virtually draining the dam in summer months and holding generators idle during fall and spring months.

Conclusions

Secretary Ickes could and should have secured water sales contracts for Central Valley Project water in 1936. At that time the farmers of the Valley were anxious to sign them. The problem of selling irrigation water is now changed.

As long as Congress continues to keep the War Department Engineers in the irrigation business, under the pretext of providing flood control on streams that are not even tributary to a navigable river, the Bureau of Reclamation will not be able to sell Central Valley Project water at a price that will repay the cost of Friant Dam and a reasonable share in the costs of Shasta. To charge costs, rightfully belonging on the shoulders of agriculturalists and land speculators, to commercial power is, on the other hand, just as unreasonable as taking them from the federal taxpayers.

The Central Valley Project Study Committees' recommendations show that Secretary Krug's allocation problem is no simple one. There are strong justifications, however, for the conclusion that the Secretary will not use the benefit theory of cost allocation, the vendability theory, nor the justifiable alternate expenditure method. Rather, Secretary Krug will probably be forced, virtually, to give the water to the irrigationists and land speculators in San Joaquin Valley. The evidence indicates, moreover, that Pacific Gas and Electric Company will continue to reap the profits from the Project's power. Meanwhile, who will pay for the Central Valley Project of California?

[18] Department of Interior, Press Release, October 13, 1943.

[19] In 1943 the Bureau of Reclamation estimated the costs of Keswick Dam, which has joint costs, and all power facilities including those to be used for agricultural pumping, at $84,653,000. A breakdown of those estimates included: Shasta Power Plant, $19,430,000; Keswick Dam and Power Plant, $14,978,900; Antioch Steam Plant; $18,130,000; Switchyards, $12,420,800; three west side transmission lines $12,597,000; Shasta-Oroville Transmission Line, $1,925,000; transformer stations, $1,801,900; and substations, $3,369,400. Senate, Sub-Committee of the Committee on Appropriations, *op. cit.*

Socialization in Housing, Great Britain and the United States

By ROSALIND TOUGH* *and* RUTH G. WEINTRAUB**

WHEN new housing should be dotting the landscape in American communities at the rate of approximately 100,000 units a month, we are still debating basic legislation. Pressure groups, unable to resolve the conflicts between private initiative and government enterprise, have thus far prevented the emergence of any comprehensive housing legislation; in the meantime, the housing crisis becomes steadily more acute. A number of bills, of which the Wagner-Ellender-Taft is the most comprehensive, attempt to resolve the dilemma and to assign the various roles that must be played by the government as financier, assumer of risk, and technical adviser—and by private industry as builder and financier. Recognizing that no legislation could pass Congress which does not assign to private enterprise the major role in postwar housing, the new bill emphasizes that the government will function only where private enterprise cannot. After making this acceptable gesture, the bill then proceeds realistically to provide governmental subsidies which remove a majority of the risks usually associated with individual initiative. Should the bill become law, it is hoped that the novel private-enterprise-government relationships envisaged will make it profitable for individual initiative to build for a larger segment of the population than was possible in the prewar era.

To a much greater extent than in the United States, Great Britain appears to accept the socialization of housing. One quarter of the four million houses built in that country between 1919 and 1939 were constructed by public local authorities with subsidies from Parliament.

In the postwar housing emergency, it is recognized that both the central and local governments as well as the private builder again must take part in the production of new, permanent houses. However, the British Housing (Temporary Provisions) Act of 1944 points out that, until October 1, 1947, the larger part of the permanent house construction will probably be undertaken by the local authorities, with governmental subsidy. Thus in Great Britain the major role of the government in breaking the postwar bottleneck in housing has been recognized.

The Housing Emergency

Neither in Great Britain nor in the United States, however, can it be said that the housing emergency has been met. Unfortunately, the many speeches, the reports of legislative and administrative officials, and the programs of social agencies have not produced houses. It may be said quite objectively that since Britain has legislation for postwar housing and is actually producing temporary family accommodations at the rate of 6000 a week (April 1946) she is several steps ahead of us. Nevertheless, not even the staunchest proponents of the Labor government can maintain that Britain had met her housing emergency; at the

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present moment, the problem is still paramount.

Here in the United States, with a policy vacillating on the role of the government and private enterprise in the postwar housing emergency, the tempo of the emergency is increasing and effective solutions are not imminent.

That the demand for housing would far exceed the supply in the immediate postwar era was foretold. A comparable situation existed at the close of World War I when, to prevent skyrocketing, states regulated rents and granted tax exemption on new construction as an incentive for building.

With this heritage, why then were steps not taken to prevent or ameliorate the postwar housing bottlenecks both in Great Britain and the United States? In the United States, there was Congressional reluctance to postwar planning; since V-J day, inner tensions as to how reconversion can best be accomplished has slowed up the emergence of a housing program. In Great Britain, although planning was well under way before the end of the war, a lag—put at the doorstep of the Churchill government — developed between plan and production of houses. However, the basic causes of the housing emergency are somewhat comparable in the two countries. In both, there has been a lag in housing construction since the beginning of the war, a period now of more than five years primarily without new construction. In addition, in the United States the rate of new construction before the war was entirely inadequate; private enterprise did not find it profitable to produce housing for families in the lower- and even the middle-income brackets. Since the government's subsidized housing program was on a very small scale in the United States, there was a housing deficit each year in terms of housing demand.

Air raid damage and flying bomb raids accelerated Britain's housing shortage. It is estimated that 202,000 houses in England and Wales were destroyed through enemy action; an additional 4,500,000 suffered damages to varying degrees. Undoubtedly, this wide scale destruction of housing in Great Britain has served as a catalytic agent in producing legislation to cope with the postwar housing problem. Shortages of manpower and materials in both the United States and Great Britain have prevented adequate maintenance of housing, so that the rate of depreciation has been accelerated; houses which with proper care might have been adequate, today are sub-standard. In the last analysis, demand is the factor that creates the shortage; this is attributable to the fact that in both countries population has continued to grow while the supply of houses has decreased. The United Kingdom reported an increase of 250,000 families between 1939 and 1944; in the United States from 1940 through 1945 the estimated increase was 696,000 families.

To meet the long-term housing needs in the United States, it is estimated that it will take new construction of 1,200,000 dwelling units a year for a period of at least ten years; to cope with the situation in Great Britain, a target figure of 300,000 to 400,000 a year has been set. When differences in the total population of Great Britain and the United States are considered, the housing needs of the two countries are approximately the same.

Demand for living quarters in terms of millions of units over the next decade means a boom in the building field, comparable to nothing which has preceded it. The philosophy under which this housing is built will do much to deter-

mine whether planned communities with standard housing result or whether we create potential slums. The overt expression of this philosophy is in enlightened legislation or lack of it. In Great Britain, a series of acts has definitely charted both the government's role and that of private industry toward redevelopment of the blitzed areas and the construction of new housing. In the United States, the conditions for teamwork between government and private industry have not yet been settled.

Great Britain's Postwar Program

Since the clamor for removing wartime controls has not reached the proportions that it has in the United States much of the accelerated role of the British government in war housing will be extended during the next five years. One pertinent explanation for this is that the role of the government in housing has been accepted. Under the Housing (Temporary Provisions) Act, August 1944, subsidies which have been given in the past only to relieve slum clearance and overcrowding and to meet the needs of agricultural laborers are now extended in scope to cover all new houses built by local governments. During the period of the emergency, greater delegation of power also has been granted to the local governments for the purpose of land acquisition. No subsidy program comparable to the above exists in the United States.

Further, the British Labor government, in an effort to meets its campaign promises, has passed the *Building Materials and Housing Act of 1946*.[1] It authorizes the Minister of Works to purchase, to produce, and to sell building materials to local authorities and, if necessary, to build for the local agency. Prefabricated parts which may cost more to produce than those made by traditional methods may be furnished below cost to local housing authorities. A revolving fund of £100,000,000 is made available for absorbing such losses. The purposes of the revolving fund are (1) to establish a stock pile of standard materials essential to building and (2), to control the prices of materials through large-scale purchases by the government. In the debates in the House of Commons, it was pointed out that housing well along had to be stopped in some districts because of lack of such small items as screws and nails and that the proposed government's stock pile would assure the smooth flow of materials. This multi-purpose Act also includes rent controls and regulation of prices of new houses for a period of four years. Violation of these regulations carries with it a fine and imprisonment.

Housing shortage because of the blitz has made it imperative that the British government provide temporary structures immediately. The Building Materials and Housing Act of 1946 increased to a total of £200,000,000 the appropriations for the erection of about 145,000 temporary houses which are being built by the national government but operated by the local authority.[2] Rents of about 10S a week are well within the means of the average Britisher. That ownership and control of these structures rests with the central government has been given as the guarantee of their temporary status. On the other hand, the underlying assumption is that within a few years permanent housing will be producted in sufficient quantities to meet needs. Should

[1] Parl. Debs., Commons, 1945, Vol. 416, December 4, 7, 1945; Lords, 1945, Vol. 138. December 11, 1945.

[2] The Housing (Temporary Accommodation) Act of 1944 had provided for the spending of £150,000,000 for temporary housing. Because the unit cost of the prefabricated house has proved higher than estimated, the appropriations for this type of dwelling unit have been increased.

facts prove contrary to this hypothesis, the makeshift accommodations may easily become the slums of the next generation.

With lack of foresight, the United States gave the coup de grace to the National Resources Planning Board during the war. Oddly enough, Great Britain during the same period established a national Ministry of Town and Country Planning, thus extending the horizons of the central government in this realm. In harmony with this trend, two Town and Country Planning Acts, passed in rapid succession (July 1943 and November 1944), provide for rebuilding of areas which have suffered extensive war damage, not house-by-house but instead in terms of community development. To prevent local planning from conflicting with national interests, the Minister of Town and Country Planning may overrule decisions made by the local planning authorities. Land acquired by the local government may be developed by the authority itself or be sold to developers who are willing to comply with established standards as to the use of the land. The central government is prepared to make a contribution to this program; it takes the form of an annual subsidy, payment to the local government of interest on loans incurred to cover the cost of acquisition, and clearance of war-damaged and adjacent ("overspill") areas. Not designed as a slum clearance program, nevertheless the rebuilding of large areas within the community will result in effective redevelopment.

United States' Postwar Program

Since, on this side of the Atlantic, no complete program has as yet been ground through the legislative mills, the role of the federal government in postwar housing has not been crystallized. This does not mean that the problem of postwar housing has been overlooked. A bill dealing with price controls for housing and incentives for producers of new types of building materials—objectives somewhat comparable to those included in the Building Materials and Housing Act of Great Britain—was introduced into Congress by Representative Patman.[3] The Patman Bill was designed to implement the 2,700,000 new-homes program of Mr. Wilson W. Wyatt, the housing expediter and head of the National Housing Agency. If the bill had become law as introduced it would have controlled the prices of old and new housing and would have provided $600,000,000 in subsidies. When the House of Representatives finished with the bill, however, price ceilings were included only for new construction; all subsidy payments were deleted. In the Senate, the subsidy payments were restored. The legislation which emerged as a result of the Conference Committee deliberations included price ceilings for new housing only, and reintroduced subsidies. Approximately a year after V-J day, Congress appropriated $600,000,000 for an emergency housing program designed particularly to meet the needs of returned service men and their families.

Hearings before the Senate Sub-Committee on Housing and Urban Redevelopment in 1944 and 1945 brought forth statements from such diverse sources as the Administrator of Veterans' Affairs, the Urban Land Institute, the Congress of Industrial Organization, the National Retail Lumber Dealers Association, the National Association of Real Estate Boards, the National Urban League, the Bowery

[3] HR 4761, November 20, 1945.

Savings Bank and the National Housing Agency.[4] Out of this ferment of ideas has come the Wagner-Ellender-Taft bill, S. 1592, the first proposal which views the problem of American housing as a whole. The bill (which passed the Senate in April 1946) emphasizes the role of the private entrepreneur but at the same time it provides for definite increases in governmental assumption of risk and federal subsidies. In many instances the private builder and financier may do the job but each of them is protected through federally-insured mortgages. Cities may decide to redevelop slum areas but the losses incurred will be shouldered by both the federal and the local governments. All of this is based on the underlying assumption that both the risk involved and part of the cost of rebuilding our cities and creating new housing for the middle- and low-income families must be borne by the federal government. Thus the much emphasized private initiative in the Wagner-Ellender-Taft bill will function only if the axle grease is federal insurance or subsidy. The only place where the bill admits the direct role of the government is where it is recognized that private enterprise cannot afford to build even with the risks removed, i. e., for families in the low-income brackets.

The most important new private enterprise feature of the bill is the inducement to build owner-occupied houses costing $5,000 or less. To accelerate the production of this type of house, the Federal Housing Administration would be authorized to insure mortgages up to 95 per cent of the appraised value. Low interest rates of 4 per cent and an additional small payment for insurance would guarantee minimum financing costs to the would-be home owner. Repayments of interest and principal on a monthly basis would be stretched over a period of as long as 32 years.

Proponents of the above point out that a down payment of as little as $250, an assured low-interest rate and repayment spread over a long period of time should open home ownership on a large scale to those families in the United States who can afford to pay only between $20 and $40 a month for standard housing.

A number of salient questions must be raised about this program. Should families in the income brackets of from $1,500 to $2,400 a year assume the risks of home ownership, particularly in an economic organization which gives no guarantee of stability of income? Should the family assume a long-term obligation extending to a maximum of 32 years? Should the obligation of home ownership be assumed by lower-income families in a rising real estate market? When the postwar boom wears itself out, is it possible that wide-scale foreclosures will result? To what extent will the federal government, having insured the mortgages, find that after foreclosures it is in the position of the largest creditor for housing in the country? Lastly, despite the fact that standards for new construction have been set up under the Federal Housing Administration, are these adequate to meet the needs of the proposed expanded program? The answers to many of the above questions are in the negative.

From the viewpoint of the housing needs of the middle-income families in the cities of the United States, the provisions in the Wagner-Ellender-Taft bill

[4] *Hearings Before the Sub-Committee on Housing and Urban Redevelopment of the Special Committee on Post-War Economic Policy and Planning.* 79th Cong. First Sess. pts. 1-14, U. S. Gov. Printing Office, 1944-45.

for cooperative housing and rental projects appear to offer possibilities. To stimulate mutual home ownership, Federal Housing Administration mortgage insurance up to 95 per cent of the value of the project would be authorized and, for rental housing, 90 per cent. Loans to run for 40 years at 3½ per cent interest would be granted. Unfortunately, experience with cooperative housing in the United States has not been favorable. It has not coped with the problem of housing the low-income groups. In America, for families in the middle income brackets, certain prerequisites to success have been lacking; among these may be mentioned homogeneity of population, geographic stability of the family, and a well developed sense of communal living. Yield insurance, a concept new to the American housing field, would guarantee investors in large-scale, limited rental housing an annual return on their investments. It is believed that the adoption of yield insurance would encourage financial institutions, such as life insurance companies, savings banks, etc., to invest their funds in large-scale housing projects. Undoubtedly this would result in new housing accommodations for the middle-income group. Granted that sufficient controls exist from the viewpoint of enforcement of desirable housing standards, the program appears to have merit, although again the ultimate risk is assumed by the federal government.

Appropriations for research and housing studies, comparable in magnitude to no previous program in the United States, are included in the Wagner-Ellender-Taft bill. Allocations to the National Housing Agency for research are contemplated, with the objective of discovering new building materials and methods of construction to reduce housing cost. An additional $25,000,000 of federal money would be appropriated to local governments, on an equal matching basis, to study housing needs and improvements in local planning. Contrary to Great Britain which has a separate National Ministry of Town and Country Planning, the research and planning proposals of the new housing bill would allocate this function to the National Housing Agency in a more attenuated form.

In this country the "ultimate to date" in public housing is found in the Wagner-Ellender-Taft bill which provides for a four-year program of annual federal contributions to local housing authorities to produce 125,000 dwelling units a year, a figure much below our needs. Since Mr. Wagner's bill has not reached the statute books, the extent of federal subsidy for postwar, low-rental housing has not been enlarged beyond the pre-war level, despite the fact that the emergency situation for this type of housing becomes more acute daily.

To quell the fears of private enterprise as to the possibilities of governmental competition, the Wagner-Ellender-Taft bill establishes a gap of at least 20 per cent between the upper rental limits for admission to the proposed low-rent housing and the lowest rents at which private enterprise is providing accommodations. The result, should the bill become law, would be a no man's land in housing.

Just as in the case of the urban, the rural housing program of the Wagner-Ellender-Taft bill encompasses both private initiative and governmental subsidy. Low interest rates by the Department of Agriculture for housing would be offered to stimulate an increase in homes for middle-income farm fam-

ilies. Annual contributions would be granted from the National Housing Agency to promote housing for rural families in the low-income brackets.

In Great Britain rehabilitation of the blitzed and adjacent areas precludes slum clearance as such. Since extensive and, in many instances, substandard areas will be rebuilt, however, the results will be wide-scale urban redevelopment. It is just possible that, with no incentive in the United States comparable to a blitz, our rebuilding of sub-standard areas may lag behind that of the British. However, the Wagner-Ellender-Taft bill envisages community redevelopment on a wholesale plan. Annual federal contributions to cities would be authorized to assist in writing down land costs. This proposal appears to be patterned on the British annual subsidy payment to the local governments for the purpose of effecting clearance of war-damaged and adjacent areas.

In addition to the annual subsidy for urban redevelopment in the United States, the American proposal includes $500,000,000 to be available for federal loans, to be used for both short-term and permanent financing. The latter, granted at the rate of $50,000,000 a year for a five-year period, would have a life of 45 years and would be made available only to local public agencies which would lease land for redevelopment. It is believed that the lessors would be either public housing authorities or, in states which have laws providing for urban redevelopment companies such as New York, financial institutions of the life-insurance or saving-bank type. Since the low price at which land will be leased to private enterprise engaged in the production of housing for the middle-income families will necessitate government subsidy, sufficient controls must exist to insure community rehabilitation according to accepted standards. It is generally conceded that sufficient controls are not inherent in present state laws providing for urban redevelopment companies.

Pressures comparable to those in Great Britain exist in the United States for temporary housing accommodations. Our returning veterans have no place in which to live. In contrast to Great Britain, where the solution to the problem of providing temporary housing is one in which the national government has assumed leadership, the American approach is on a "catch-as-catch-can" basis at the municipal and state level. Foresighted municipalities have been trying to cut the red tape necessary to secure surplus military barracks and have been competing for Quonset huts, trailers and demountable houses which are under the control of the army, navy and the Federal Public Housing Authority. It was not until the spring of 1946 that Congress appropriated a total of approximately $400,000,000 to the National Housing Agency to move temporary war housing to localities in need. Again, as in England, the problem of replacing the temporary structures with permanent housing before the former become urban slums is a vital issue.

When at the end of 1942, under the emergency war powers of the President, Mr. Roosevelt merged the 16 competing governmental housing agencies in the United States into one National Housing Agency, it was hailed as the first step toward the attainment of efficient, unified administration in the housing field. It is not unexpected, therefore, that the Wagner-Ellender-

Taft bill carries a recommendation to make the emergency reorganization permanent. One central National Housing Agency divided into three sub-sections —a Home Loan Bank System, a Federal Housing Administration, and a Federal Public Housing Authority— has demonstrated its superiority to the previous chaos resulting from multiplicity of governmental housing agencies. Pres. Truman has anticipated this section of the proposed legislation. In accordance with the powers granted to him under the most recent reorganization act, he presented Congress with a plan to make the National Housing Agency permanent; this was debated.

Although nominally Great Britain has concentrated authority for postwar housing in one agency, i. e., the Ministry of Health in England and Wales and the Department of Health in Scotland, other agencies share responsibility. The Minister of Works is the arbiter for questions affecting construction such as design, materials and building technique; over-all physical planning comes within the scope of the Minister of Town and Country Planning (in Scotland this function is performed by the Department of Health.

From Here, Where Next?

In the United States, no broad, well-defined road leads to the ten-year-housing objective of 1,200,000 new-family accommodations annually; more important, no program has been adopted to assure that the new construction attainable will conform to standards for planned decentralization, i. e., decreased population density, provision of greenbelts and green wedges for recreation and health, housing structures oriented for sunlight, shopping centers within walking distance of homes, and industries located in proximity to the dwellings. These and a host of other standards have been discussed for decades in the realm of community planning. Nevertheless, in the United States with the lack of adequate local governmental regulation existing under prevailing zoning ordinances and building codes, it is more than probable that the mistakes in housing construction of the postwar twenties will be repeated in the postwar forties.

Recentralization, a redistribution of land uses on a functional basis, is not the result of happenstance. It necessitates careful planning from the point of view of conservation of the ultimate in community values. For the United States such objectives are primarily still in the realm of the stratosphere.

To a much greater extent, Great Britain is attaining these objectives. An analysis of the plans to rebuild Coventry or London after the blitz indicates that the new development is no mere repetition of the prewar city. The fact that in reconstruction of the blitzed areas the government recognizes that it will be essential to build not only in the damaged areas themselves but to spread out into the adjacent territory, designated as "overspill areas," gives recognition of the fact that the new construction is to have lower land coverage to accommodate fewer people per acre and as a result to have greater open space for health and recreation. To achieve these objectives Britain has found it necessary to create a Ministry of Town and Country Planning functioning on a national level and to grant national subsidies to local governments to effect the new land use. The fact that in the United States we have no

comparable agency is decidedly to our disadvantage.

Only a "grade A" optimist could assert that Britain has met the housing emergency. Such is not the case. Her returning veterans are just as allergic to the lack of accommodations as are the G. I.s in the United States; in both instances the central governments seem to be failing to cope adequately with the situation; in the two countries housing has become a prime political issue. Had Mr. Churchill treated it with sufficient respect in Great Britain, it is just possible that the labor government could not have taken over. In the United States, could Mr. Truman find his way through the labyrinth existing between the accepted realms of private initiative and public enterprise, he would do much to break our housing bottleneck. However, both in the United States and in Britain, it is not just a question of more housing, but more and better housing; the solution is not merely new construction but planned community development. Great Britain's two Town and Country Planning Acts of 1943 and 1944 and the Housing (Temporary Accommodation) Act of 1944 each embody to some degree a philosophy of planning. Straddling the demands of both private initiative and governmental enterprise in the realm of housing, the Wagner-Ellender-Taft bill, United States' omnibus housing measure, is much less clear-cut. In the setting created by the objectives stated in the introduction to Senator Wagner's bill, it appears that the federal government will play the part primarily of an understudy for private enterprise. This impression is false. Might it not be well to recognize that, had the proposed bill with its provision for subsidies and assumption of risk by the federal government become law, the contribution of the understudy to the housing drama would have constituted a stellar role.[5]

[5] With the adjournment of the 79th Congress August 2, 1946, S 1592, the Wagner-Ellender-Taft bill died in the House of Representative's Committee on Banking and Currency. Thus no long-range federal public housing program was adopted and the housing dilemma in the United States continues to remain unsolved.

Measuring the Quality of Urban Housing Environment: A New Appraisal Technique

By ANATOLE A. SOLOW*

The Changing Concept of Urban Housing and the Importance of Neighborhood Environment

TOWARDS Large-Scale Rehabilitation of Blighted Areas. During the last decades efforts to improve housing conditions by demolition of isolated slum dwellings have been abandoned in favor of the construction of large-scale housing projects. More recently the entire replanning of slums is being advocated as the only cure for the progressive decay of downtown areas. Thus, the concept of housing betterment is evolving from a haphazard and piecemeal approach to a concerted and planned attack on the entire substandard areas of our communities.

Effect of Neighborhood Environment on Housing Adequacy. Too frequently the health menace of slums has been expressed only in terms of overcrowding, lack of sanitary facilities, and structural defects of buildings; factors which reflect the substandardness of individual structures but which fail to show the detrimental effect of poor neighborhood environment upon the health of slum dwellers. Yet, the exposure to traffic hazards in the streets may be likened to accident hazards created by rickety stairs or broken plaster inside the house. The lack of adequate open spaces may be as detrimental as the overcrowding of rooms. The danger from flooding of lowlying residential land cannot be viewed less seriously than is the lack of bathtubs in dwellings. Refuse dumps and junk yards are harborages for rat-breeding which will offset efforts at rat-proofing of individual structures.

The cumulative impact of poor environment is profound in its effect on normal and satisfactory family life. The reaction of an average family towards undesirable urban surroundings is well illustrated by the general movement of population away from the center of cities to the suburbs.

Undesirable neighborhood conditions affecting entire districts rather than single buildings are often the basic causes of blight. They undermine neighborhood stability and contribute to premature obsolescence of residential districts. It is a well-established fact, for instance, that the extension of industries and commercial establishments into residential neighborhoods is inevitably followed by the deterioration of individual houses. The routing of heavy traffic arteries through a residential area brings with it a number of undesirable features such as noise, fumes, and accident hazards, which are likely to start that district on a downward trend. Zoning as an instrument to stabilize neighborhood character has recognized these forces which are entirely beyond the control of individual house owners or occupants.

The conclusion must inevitably be drawn that neighborhood environment is a factor of paramount significance in evaluating the adequacy of existing housing. Therefore, a scientific and objective appraisal of environmental factors must precede any rehousing or replanning schemes.

Needed—A Scientific Method to Eval-

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uate the Quality of Urban Environment. The development of tools for objective measurement of significant phenomena has characterized progress in nearly every scientific field; yet for measuring the detrimental effect of urban environment only inadequate methods have so far been available.

In the usual type of city-wide property surveys, such as the Real Property Inventories, for example, great emphasis is placed on economic and financial factors while little, if any, attention is paid to environmental influences such as exposure to traffic hazards and industrial nuisances or availability of community facilities. This omission has frequently led to the location of new housing projects near railroads and noxious industries, thus failing to safeguard the health of the rehoused families. By building modern projects on sites that may be basically unsuited for residential use, the seeds of future slums are being planted.

Over the past several years the Committee on Hygiene of Housing of the American Public Health Association has developed a new housing appraisal technique in which the evaluation of neighborhood environment has a prominent place. This technique may be of particular value to city planning commissions, housing authorities, and health departments which are faced with questions such as: Is a certain district ripe for demolition? Should it be improved through gradual rehabilitation? Does it warrant capital investment and does it lend itself to a continued residential use?

The Environmental Appraisal Technique

The development of the appraisal method was originally prompted by numerous requests from public health and housing agencies that the Committee translate its standards for new housing as given in the *Basic Principles of Healthful Housing*[1] into a yardstick to measure the quality of existing urban housing. The research, extending over a period of several years, was carried on through the Subcommittee on the Appraisal of Residential Areas under the leadership of Rollo H. Britten of the U. S. Public Health Service.[2] In the course of this work, survey schedules and complete procedures for field work, office processing, and presentation of findings were developed and continuously tested in the field. Surveys made in cooperation with public health, housing, and city planning agencies in several cities throughout the states have convinced the Committee of the practicability of its method.

The technique comprises two distinct parts, the first covering the appraisal of structures and dwellings, and the second the evaluation of environmental factors.[3] Some features apply equally to both parts of the technique, but they are discussed here with reference to the environmental appraisal only; even then, merely the highlights can be given in this brief presentation and the reader is referred for further details to other publications of the Committee.[4]

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1 *Basic Principle of Healthful Housing*: Committee on the Hygiene of Housing, American Public Health Association. New Haven, Connecticut.

2 Other members of the Subcommittee: Frederick J. Adams, F. Stuart Chapin, Ph.D., Andree Emery, Alfred H. Fletcher, L. M. Graves, M.D., Maynard W. Meyer, Robert B. Mitchell, M. Allen Pond, Allan A. Twichell, Technical Secretary; Anatole A. Solow, Research Associate; E. A. Tiboni, Acting Research Associate.

3 The environmental part of the technique was developed in cooperation with the Research Department of the City Planning and Housing Division, Massachusetts Institute of Technology.

4 The manuals describing the full technique, *An Appraisal Method for Measuring the Quality of Housing*, are published by the American Public Health Association, 1790 Broadway, New York 19, New York. Part I, "Nature and Uses of the Method" is a nontechnical introduction, describing the technique and sketching the conditions under which effective studies can be made. The

(*Footnote 4 continued on page 284*)

Principal Characteristics. The steps in the execution of the appraisal follow in general the established routine of housing surveys which consists of first gathering the necessary information in the field and from existing office sources, of processing the collected data, and finally of presenting the findings in an objective and comprehensive form which will permit the drawing of conclusions. Special features of the Committee's technique may be summarized as follows:

1. Recording of all conditions which are known to affect health and safety, with emphasis on items which are qualitative rather than descriptive.
2. Field schedules and instructions which permit the objective reporting of these conditions by quantitative measures or by consistent observation by different enumerators and at different seasons of the year.
3. A rating method in terms of numerical penalty scores assigned to specific deficiencies and summed up in an overall penalty which expresses the total quality of environment.
4. Systematic office procedures including rating forms and tables for rapid and easy processing of the collected data.
5. Guides for the analysis and graphic presentation of significant findings based on the rating method.

Neighborhood Factors Included in the Appraisal. An exhaustive survey which would attempt to cover all aspects of housing environment could easily overtax the manpower and financial resources of even the best staffed housing, planning, or public health agency. Some complex data can be obtained only by highly-trained professional personnel with elaborate equipment. Practical considerations, therefore, made it necessary to select a limited number of appraisal factors.

Only those factors were included which affect existing housing in an adverse manner and which therefore indicate a departure from housing adequacy. Consequently, items selected were those most directly associated with threats to health, safety and amenity, such as periodic flooding of low-lying areas along rivers, excessive noise or smoke from industrial sources, traffic hazards from major thoroughfares, nuisances from adjacent railroads and excessive land crowding.

The necessity of limiting the number of items led to the selection of factors which not only indicate specific deficiencies but which can serve as index items varying clearly with good or bad environment. It appears, for instance, that heterogeneous land uses in downtown districts tend to coincide with generally undesirable housing conditions, while purely residential areas commonly show better housing. The intermixture of industrial and commercial uses with residences adversely affects not only the health of the residents but it reflects the overall deterioration of neighborhoods. The importance of index items cannot be overemphasized for such a method affords economies in the execution of large surveys.

Each of the twenty-four principal items included in the survey (Table I) was broken down into a number of measurable subitems. The detrimental effect of excessive coverage (Item 1, Table I) is measured in terms of (a) the block area covered by principal or major structures, and (b) the area covered by minor structures such as garages, tool sheds, etc. These studies showed conclusively that the minor structures which are usually distributed haphazardly inside a block contribute significantly to

(*Footnote 4 continued from page 283*)
full procedures for execution are given in two volumes: Part II, "Appraisal of Dwelling Conditions"; Part III, "Appraisal of Neighborhood Environment." Part I is now available; the detailed procedures (Parts II and III) are scheduled for publication during the summer and fall of 1946.

the lack of light, air, and usable open space. Playground adequacy (Item No. 20, Table I) is measured by five subitems: walking distance, number of dangerous pedestrian crossings, adequacy of size, maintenance conditions, and the need for public open spaces in relation to already existing private gardens.

It was found that, in a broad sense, environmental factors may be divided into two groups: those which affect equally or nearly equally all structures in a block, and those whose influence is primarily confined to the dwellings along a single street frontage. Coverage and building density, for instance, fall in the first group, while the second includes street hazards. Consequently, blocks and street frontages were accepted as alternate geographic units for rating and data analysis.[5]

TABLE 1. APPRAISAL ITEMS AND MAXIMUM STANDARD PENALTY SCORES

Item	*Maximum Score*	
A. *Land Crowding*		
1. Coverage by Structures	24	
2. Residential Building Density	20	
3. Population Density	10	
4. Residential Yard Areas	16	70
B. *Nonresidential Land Uses*		
5. Areal Incidence of Nonresidential Land Use	13	
6. Linear Incidence of Nonresidential Land Use	13	
7. Specific Nonresidential Hazards or Nuisances	30	
8. Hazards to Morals and the Public Peace	10	
9. Smoke Incidence	6	72
C. *Hazards and Nuisances From Transportation System*		
10. Street Traffic	20	
11. Railroads and Switchyards	24	
12. Airports	20	64
D. *Hazards and Nuisances From Natural Causes*		
13. Surface Flooding	20	
14. Swamps or Marshes	24	
15. Topography	16	60
E. *Inadequate Utilities and Sanitation*		
16. Sanitary Sewerage System	24	
17. Public Water Supply	20	
18. Streets and Walks	10	54
F. *Inadequate Basic Community Facilities*		
19. Elementary Public Schools	10	
20. Public Playgrounds	8	
21. Public Playfields	4	
22. Other Public Parks	8	
23. Public Transportation	12	
24. Food Stores	6	48
MAXIMUM ENVIRONMENT TOTAL		368

Selection of Survey Areas. The technique is designed primarily for intensive appraisal of limited problem areas rather than for entire cities. A housing authority will undoubtedly be concerned with the worst areas, for purposes of slum clearance. On the other hand, a city planning commission interested in a broad conservation program would wish to determine in detail the conditions existing in areas of marginal quality in order to decide whether they are worth at least partial rehabilitation. Before applying the detailed environmental survey to a specific area, therefore, tentative boundaries of "problem areas" have to be drawn to permit the selection of one or more survey districts.

Preliminary screening of areas may be based on the 1940 federal housing census or other available data. Although it may be assumed that high class residential neighborhoods are adequate from the view point of official housing agencies, it is nevertheless suggested to apply the survey to a few typical blocks in order to obtain a basis of comparison within the community.

Data Collection and Processing. Some of the data are collected in the field by inspection of individual premises, but a great part of the information may be obtained from the files of local housing and planning agencies. It is suggested to make the widest possible use of the material normally accumulated by the various city departments.

Special schedules and forms for the collection and processing of the data are

[5] It should be pointed out that this method is intended for urban areas with more or less typical block patterns and that outlying and sparsely populated districts would have to be treated somewhat differently.

supplied by the Committee. Land uses and certain other data are recorded in the field on a block list and block map which serve also to compute coverages, densities, and other calculations. Industrial establishments expected to be sources of nuisances are investigated by means of a nuisance schedule. Data for most of the factors, however, are collected on a neighborhood basis, treating the entire survey area as a single unit. Overlay maps are used to record the information.

Finally, each item and subitem is rated from scoring tables and the penalties are summarized by blocks and street frontages on rating forms which are used for statistical interpretation of the findings.

Personnel Needed for the Execution of the Survey. It is envisaged that neighborhood appraisals of this type will be carried out under the supervision of an engineer or qualified technician with experience in the field of city planning, housing, or environmental sanitation. His duty will be to supervise the collection of the data in the field, to direct the office computations necessary for the final results, and to coordinate the data from the various sources. His primary job will be, however, to interpret the data, to extract the conclusive findings, and to formulate the recommendations of the final report.

The enumerators for the field work can be trained in a short time. It is hoped that appraisals of this type will become part of the routine work of local city planning agencies, housing authorities, or public health departments, or still better, that surveys will be carried as cooperative projects of all local agencies concerned with housing. In that case, the field work could be handled by sanitary inspectors or other inspectorial personnel of city departments.

Office processing of data is best handled by a statistical clerk although a regular stenographer could be trained in a few days to make the necessary transcriptions, rating, and statistical analyses.

The Rating System. The rating system is the distinctive feature of the technique and lies at the heart of its effectiveness. It translates descriptive conditions into a set of easily comparable numerical values. Since the appraisal is designed for agencies concerned with substandard housing, the rating method measures deficiencies instead of assets. Consequently, the scores consist of penalty points assigned to conditions which fall below reasonable standards.

Inadequate neighborhood conditions can be expressed in terms of numerical penalties if sound criteria are used to define minimum acceptable standards and if the degree of departure from the norm is measured against a realistic set of values. The standards set forth in the Committee's *Basic Principles of Healthful Housing* were taken as a point of departure for the rating scale.

In establishing penalty weights the Committee was guided by the method already developed in the first part of its housing appraisal dealing with individual dwellings. It was recognized, of course, that clear-cut standards for neighborhood deterioration are more difficult to define than for individual structural deficiencies. Public officials readily agree that the lack of a private flush toilet in a dwelling is a basic deficiency which warrants remedial action, i. e., repair, closing, or demolition. But exposure to nuisances from industries or traffic, for instance, does not at present call for any direct action by official agencies. A number of outstanding specialists in the field of environmental sanitation, city planning, housing, and public health were consulted and, based on their consensus,

scoring tables were drawn up giving the number of penalty points for each environmental item in relation to the degree of substandardness.

A separate penalty is assigned to each item shown in Table 1.[6] Points for individual deficiencies range from 1 to 30 whereby a score of 0 represents a condition which meets a minimum standard of adequacy. Penalties express varying degrees of departure from the acceptable minimum in terms of slight, moderate, considerable, and extreme threats to health, safety or basic amenity.

The following table illustrates how encroachment of business and industrial land uses (Item 5, Table I) in a residential block is penalized.

TABLE II

Percent of Block Area in Business & Industrial Use	Estimated Threat to Health, Safety or Basic Amenity	Penalty Points
0.1 — 9.9 Percent	Slight	3
10.0 — 19.9 Percent	Moderate	6
20.0 — 29.9 Percent		8
30.0 — 49.9 Percent	Considerable	10
50.0 and more Percent		13*

* The maximum penalty for land use intermixture is relatively low: however, the occurrence of specific nuisances is rated separately and receives an additional penalty under Item u, Table I.

All scoring is done in the office from rating tables, and the rating form is so arranged that the penalties for various factors may be totalled in any desirable combination. Subtotal A, Table I, gives the sum penalty for all items included under "Land Crowding," Subtotal B for "Nonresidential Land Uses," and so forth for the six major groups of items.

The total scores give the sum of all penalties for each street frontage and each block. *Thus, a single index figure expresses the total quality of environment.*

Interpretation of Findings and Uses to Which They May be Put.

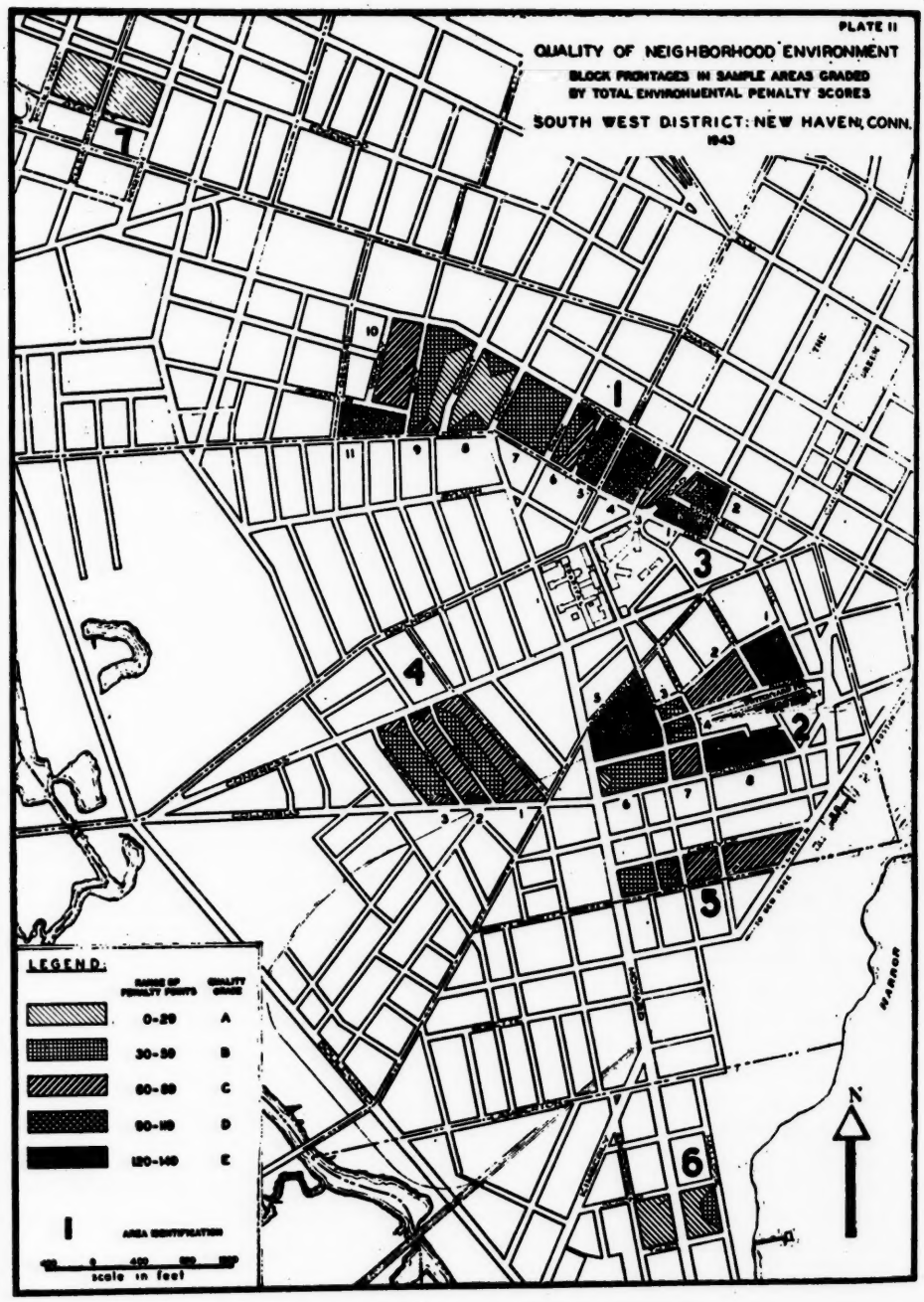
At what point in the rating scale does a neighborhood warrant official action? At what level will total penalties qualify an area as a slum? The meaning of penalty scores may best be explained at the hand of some practical examples from the New Haven test survey where the Committee's environmental appraisal technique was used extensively for the first time.[7] Since the interpretation of neighborhood conditions by means of penalty scores calls altogether for new ways of presenting the results of a housing survey, the Committe offers a special method of data analysis.

Description of the New Haven Test Survey. The survey of the Southwest district of New Haven was carried out as a cooperative project by the Committee and five governmental agencies; the local Health Department, City Plan Commission, the Housing Authority, the State Health Department, and the U. S. Public Health Service.

The district extends from the central downtown business section to the south

[6] It should be remembered that the rating for each item is made up of penalty scores for as many subitems as are included in the appraisal to reflect realistically the essential characteristics measured.

[7] Several housing surveys have been carried out since the early test surveys; in New Haven, Connecticut; Portland, Maine; Los Angeles, California; Milwaukee, Wisconsin; and Germantown, Pennsylvania. Since the author of this article was on leave of absence with the Army of the U. S. during this time, he has been unable to use the findings of these recent studies for illustrative purposes. The surveys mentioned above were executed on a substantial scale, and their findings give a broader picture of the Committee's housing appraisal technique. The findings of the New Haven study were published, in part, in "Today and Tomorrow," the *Sixth Annual Report* of the Housing Authority of the City of New Haven, 1943-1944. The Portland findings were presented in the report of the Committee to the Portland City Planning Board and Health Department, "Does Bayside Need Rebuilding?," March 1944. The Los Angeles and Milwaukee studies are still in process and no formal reports have been published as yet. The findings of the Germantown study are given in Part III of the appraisal manuals, "Appraisal of Neighborhood Environment."



Cross hatchings indicate quality grades diagrammatically for each block frontage separately.

and west. The area takes in about one-sixth of the city's developed area and houses 42,000 of its 160,000 persons. It includes extreme slums, areas of problematic quality, and fringes of clearly self-sustaining neighborhoods. The health, building and fire departments recognize the district as one of excessive inspection and enforcement burdens. The housing authority desires to find sites there for postwar housing projects and the city plan commission has undertaken a replanning study of the district.

After a screening study of the 1940 Federal Housing Census data, seven sample areas were chosen to represent a range from concentrated slums to neighborhoods clearly free from serious housing problems. Thirty of the blocks were completely surveyed for environmental characteristics. (See map for location of areas.)

Overall Quality of Neighborhood Environment. For convenience in mapping and further classification, the total range of penalties—that is, from the clearly acceptable to the extreme worst—was divided into five classes, A, B, C, D, and E, at 30-point intervals, so that a block frontage incurring 0-29 points would fall into Class A, a block frontage with 30-59 points into Class B, etc. The median penalties for all frontages in each class were 15, 48, 72, 100 and 120 points respectively.

The Meaning of Total Penalty Scores. What types of neighborhoods do the five classes of total penalties represent? How prevalent are serious environmental deficiencies in Class E blocks with penalties of over 120 points as compared to Class A blocks which received only 0 to 29 penalty points? A study of ten characteristic neighborhood factors contributing to the total penalty scores in each of the five categories will translate abstract numerical values into descriptive labels clearly representing different grades of neighborhoods.

A bar-graph was made which shows the per cent of block frontages having serious deficiencies, with penalties at or above a selected level. Thus, for example, 33 per cent of frontages in Grade E had penalties of 10 points or more for coverage by structures (Item No. 1), 21 per cent in Grade D, and 10 per cent in Grade C. None of the frontages in Grades A or B incurred such high penalties for this item.

It will be noted that although any penalty above zero would already indicate a departure from acceptable conditions, the degree of substandardness for each factor is shown in terms of high penalties. This was done on purpose so as to establish major environmental deficiencies which would beyond any doubt represent highly detrimental and extremely undesirable neighborhood conditions. For example, a penalty of 10 points or more qualifies excessive land coverage by structures as a major deficiency. In order to suffer such penalties, a block would have to have a gross coverage by major structures of at least 40 per cent. For Item 5 the qualifying level was taken as 10 penalty points or more, representing at least 30 per cent of the block area in industrial, commercial, or mixed uses. Fifteen points for considerable hazards and nuisances from street traffic would indicate a major traffic artery with a median setback of structures of less than 20 feet. The other items were treated in a similar way.

Description of Quality Grades. It is now possible to define the five quality grades of environment in concrete terms as follows:

QUALITY GRADE A: (0-29 penalty points) Frontages are completely free of any serious deficiency except in the case of public play fields (20 per cent). This

condition, however, is due to a general lack of play fields throughout the city and may be expected in almost any urban community. Grade A, therefore, represents clearly adequate neighborhood conditions.

QUALITY GRADE B: (30-59 penalty points) The few major deficiencies found in this area are due mainly to slight intermixture of nonresidential land uses. The inadequacy of public open spaces is also more pronounced. Only 3 per cent of the frontages have appreciable hazards from street traffic. It is clear, therefore, that blocks of Grade B are still essentially of good quality as judged by the Committee's standards.

QUALITY GRADE C: (60-89 penalty points) A number of major deficiencies are prevalent here but, although all items except residential building density occur in substandard form, their incidence is relatively low. Only 10 per cent of the frontages have high block coverage. There is some incidence of nonresidential land uses and of hazards from street traffic and railroads, and more frontages lack public open spaces than in Grades A or B. We may, therefore, consider Grade C as being of intermediate quality, which is still substantially adequate, but which would require some improvements to bring such areas fully up to acceptable standards.

QUALITY GRADE D: (90-119 penalty points) Frontages are exposed to an extreme concentration of major neighborhood deficiencies, and may, therefore, be classified as a low-grade, seriously substandard area where corrective action by city departments will definitely be needed. Serious land crowding occurs frequently (21 per cent). Intermixture of commerce and industry with residences is prevalent (92 per cent), and its detrimental influence is emphasized by high incidence of nuisance such as noises, odors, smoke, dust, etc., generally associated with nonresidential uses. Hazards from traffic arteries (37 per cent), and an almost complete lack of public open spaces (79 per cent) within normal walking distance further reduce the livability in blocks of this quality.

TABLE III. INCIDENCE OF SELECTED MAJOR DEFICIENCIES IN FIVE QUALITY GRADES OF ENVIRONMENT

PERCENT OF BLOCK FRONTAGES WITH STATED DEFICIENCY
SOUTHWEST DISTRICT, NEW HAVEN, CONN.

	Criterion of Major Defic. Penalty Pts.	GRADE A 0–29 pts.	GRADE B 30–59 pts.	GRADE C 60–89 pts.	GRADE D 90–119 pts.	GRADE E 120+pts
1. COVERAGE BY STRUCTURES:..... over 40% gross block area covered by major, or over 10% of net by minor structures	10 or more	0%	0%	10%	21%	33%
2. RESIDENTIAL BUILD. DENSITY:..... ratio of floor to ground area over 2.5, or residential area in mixed and business use over 40%	10 or more	0	0	0	21	66
5. INCIDENCE OF NONRES. LAND USES:..... over 30% of block area in industrial, commercial or mixed use	10 or more	0	3	38	92	100
7. HAZARDS AND NUISANCES FROM INDUSTRIAL OR COMMERCIAL SOURCES:..... high incidence of specific sources	18 or more	0	11	22	53	100
8. HAZARDS TO MORALS AND PUBLIC PEACE..... frontage in area with considerable or extreme hazards	6 or more	0	0	18	42	55
10. HAZARDS AND NUISANCES FROM STREET TRAFFIC: major or minor traffic artery, setback of structures and street width inadequate	15 or more	0	3	26	37	55
11. HAZARDS AND NUISANCES FROM RAILROADS:... proximity to railroads or switchyards	8 or more	0	0	10	0	22
20. PUBLIC PLAYGROUNDS:..... beyond ½ mile or otherwise inadequate	8	0	7	44	96	100
22. OTHER PUBLIC PARKS:..... beyond ½ mile or otherwise inadequate	8	0	21	52	79	67

QUALITY GRADE E: (120 or more penalty points) Here we have a picture of a highly-substandard and deteriorated environment which hardly needs any further elaboration. A 100 per cent incidence for four major deficiencies indicates beyond question that block frontages of Grade E are thoroughgoing urban slums.

Geographic Grouping of Areas of Homogeneous Quality. Delimitation of homogeneous areas in which uniform remedial action may be applied is likely to be the first concern of housing and planning agencies as well as local health, fire and building departments. It is here that the concept of quality grades permits a new kind of interpretation and graphic presentation. The map shows the geographic distribution of block frontages classified by quality grades according to total penalties. The analysis of the pattern makes it possible to see whether blocks may be grouped into subareas of uniform quality for future replanning and remedial action.

Sample Area No. 1. The eleven blocks of this sample area fall distinctly into three groups. To the east, Blocks 1 to 5 and three frontages of Block 6 are in quality grades C, D, and E. The mean penalty for these blocks is 94 points which classifies them into Grade D, so that this entire area may be taken as a uniformly substandard district. Penalties for individual factors in these blocks reveal particularly serious land crowding, with a relatively high population density of 159 persons per acre and an average block coverage by major structures of 48 per cent. The usability of the remaining open space is reduced because over one-third of the residential structures have stores on the first floor. The real problem of this area, however, is the general intermixture of commerce, industry, and business, since 54 per cent of the block area is taken up by these uses. Small business establishments account for many sources of noise, fire hazards and rat breeding. Traffic hazards are considerable, and public open spaces are beyond walking distance or can be reached only by crossing several major traffic arteries. One of the conclusions that may be drawn even from this condensed picture is that the location of an isolated housing project here would not be justified unless the entire area were rehabilitated.

A sharp break in quality occurs in Block 6, and Blocks 7 to 9 fall in quality Grades A and B, but to the west of this good area are two blocks, Nos. 10 and 11, of C and D quality. It would appear, therefore, that unless the threat of blight is checked in time, the high grade blocks wedged in between two substandard areas have little chance of preserving their good quality.

Sample Area 2. This area shows a marked concentration of slum conditions around the switchyard and railroad. Although Blocks 3, 4, and 6 are of better quality, considerable nuisances are produced by the food market and other fairly large industries located near the switchyard, so that this entire area may be considered as an unsuitable site for residential use. The main problem of this area is due to the detrimental effect of major traffic arteries and the railroad, which is clearly indicated by high penalties for these factors.

Sample Area 4. This neighborhood is of an intermediate quality, and the predominance of block frontages in C grade would indicate that some corrective measures might bring this area up to acceptable standards. Land crowding is mainly due to excessive coverage by minor structures (over 5 per cent of net block area) in the center of the block, which increases the total coverage in Blocks No. 1 and No. 2 to 42 per cent. Considerably better use of rear yard space could

be obtained by removing dilapidated sheds and other unnecessary secondary buildings. Intermixture of commerce and industry with residences also present further detriments (approximately 20 per cent of block area in commercial, industrial, or mixed uses), but a further analysis shows that the specific nuisances arise mainly from junk yards in poorly kept condition. Here remedial action should certainly be possible, and it would seem reasonable to assume that the spread of blight could be checked, although this would require numerous physical improvements.

Sample Areas 6 and 7. A comparison between Areas 6 and 7 is interesting, since the latter was selected as a control in a high class neighborhood, and the former in a moderately good district. The mean penalty for block frontages in Area 7 is 11 points, while the mean penalty for the blocks in Area 6 is 25 points. Inspection of the blocks and discussion with the city plan engineer and health inspectors familiar with the district substantiated that this differentiation reflected actual conditions and that, although Area 6 is quite acceptable according to the present rating scale, the neighborhood does not come up to the high standard of Area 7. It will be noticed that all frontages in Area 6 are in quality Grade A, with the exception of the frontage on Hallock Street. The location of a large rubber processing plant across the street accounts for the high penalties of this frontage.

Conclusions drawn on the basis of such limited and discontinuous areas must be considered as tentative until the appraisal is extended to the intervening sections of the district. But it is believed that even this partial interpretation of the data demonstrates the value of this appraisal method as a diagnostic tool in the hands of official agencies, both for the broad evaluation of neighborhood quality in terms of healthfulness and livability, and for the formulation of realistic housing policies.

Significant Neighborhood Deficiencies. The table on page 290 accompanying this article, showing the incidence of major environmental deficiencies, may be used to select the factors which differentiate most sharply between good and bad environment. It appears that the incidence for four out of the ten factors shows a marked and consistent increase from Grade A to Grade E. These factors are: coverage by structures (Item No. 1), incidence of nonresidential land uses (Item No. 5), specific nuisances from industry and commerce (Item No. 7), and street traffic hazards (Item No. 10). When combined penalties for these four factors are compared with total penalty scores, the close correlation between overall neighborhood quality and these selected factors is substantiated.

Significant neighborhood characteristics will obviously vary from city to city. A small test survey in Corpus Christi, Texas, showed, for example, that the predominant defects of neighborhood environment were lack of sidewalks and pavements, extremely high population densities due to crowding, the presence of yard toilets and other unsanitary yard conditions. In the New Haven survey, however, there was a downtown blighted district, which is typical of most medium-sized cities in the northeastern region. More recent surveys in Portland, Maine, and over large areas of New Haven have conclusively substantiated that the four factors previously mentioned seem to be the best indices of poor environment.[8]

Descriptive Characteristics. Many special analyses of scores may be made in order to interpret data for specific enforcement problems requiring the imme-

[8] See publications cited in footnote 7.

diate attention on the part of local police power agencies. No rigid plan of tabulation is suggested because it is felt that the interpretation of findings should be guided by the objectives of surveys in each locality. It has been already pointed out, for example, that land crowding could be relieved in many cases by the elimination of unnecessary secondary structures and by the replanning of interior block space.

Although extremely high concentrations of commercial uses in some sections of the district throw doubt on their adequacy for residential use, an analysis of specific nuisance sources showed that in a number of sample blocks, the removal of junk yards, outdoor poultry markets, and small commercial establishments located in delapidated structures would raise the general standard of these neighborhoods considerably.

Finally, it is believed that an appraisal of this type may be of use to park departments, assessors' offices, zoning commissions, real estate groups, welfare agencies and other bodies which are concerned directly or indirectly with housing. Penalty scores may be tabulated for such categories as land values, amount of tax delinquent land, rental levels, vacancies and population characteristics, and will reveal significant relationships between these factors and the quality of environment.

Neighborhood Appraisal as a Basis for Housing Policy

The Committee hopes that the results obtained from systematic housing appraisals will guide the formulation of corrective schemes, and that this approach will help to mould new legislation at the level of neighborhood environment which is sorely needed. Careful analysis of neighborhood defects should lead to the establishment of specific legal standards enabling official actions for neighborhood conditions similar to those now possible with respect to the substandardness of individual structures.

Concrete remedial action, progressive and "aggressive" improvement of housing conditions ranging from the enforcement of police power regulations in low grade districts to complete eradication of urban slums should be the watchword of the day and should at last replace the attitude of inertia towards urban rehabilitation.

It is hoped that the practicability and usability of the new appraisal technique developed by the Committee on the Hygiene of Housing has been convincingly demonstrated, and that it will become a standard tool in the hands of all agencies concerned with housing. The results are significant not only because the interpretation of the findings is strikingly simple, concise, and brief, but because the rating method in terms of numerical penalties offers, as it were, a standard yardstick to measure the housing defects of our urban communities. Findings thus obtained present unquestionable objective data which should eliminate any pretexts for complacency on the part of local administrative agencies and the public at large. For the time has come when we cannot any more be satisfied with beautiful generalities about the decay of urban areas and the need for their rehabilitation. Progress in this field can be measured only in terms of realistic achievements.

Reports and Comments

Filtering Down and the Elimination of Substandard Housing: A Reply

In his closely reasoned and highly stimulating article, "Filtering Down and the Elimination of Substandard Housing," published in the November 1945 issue of this Journal, Professor Richard U. Ratcliff has established a splendid conceptual framework as a point of departure for further research on this significant subject. While the author has cleared away many of the misconceptions which tend to confuse thinking in this area, a non-sequitur is observable in the important concluding sentence of his own article:

> "In the long-run, once we have cleaned out the existing slum conditions, the filtering process probably can be counted on to maintain our housing stock at a fairly constant quality level provided that housing is removed from the market as fast as it falls below minimum standards, and provided that in-migration of low-income families is not so rapid as to outstrip the product of the filtering process."

While it is to be hoped that this statement will prove true, Mr. Ratcliff's own admirable analysis neither supports nor denies this conclusion. From the article itself, it is clear that the ability of the filtering process to maintain the stock of housing at a substantially constant quality level depends upon many provisos other than those given. In a proximate sense it depends, for example, upon the size, frequency, and price level of the surpluses from which the filtering down effect derives and upon the adjustment of the market to these surpluses. These conditions in turn will be influenced by such factors as housing costs, family incomes, consumers' tastes and expenditure habits, progress in technology and design, and the market judgments of various economic units. It is precisely upon such relationships as these that more research is so badly needed, as Mr. Ratcliff himself has been a leader in demonstrating. His final statement therefore must be regarded as a somewhat detached hypothesis rather than as a reasonable conclusion from his own analysis, as the context would indicate.

The limited effectiveness of the filtering process in eliminating substandard housing also could have been more fully illuminated by Professor Ratcliff had he expanded his analysis to include a geographic concept of market processes as well as a purely economic one. It should not be forgotten that the process referred to as "filtering down" can also be described with accuracy as "filtering across." For existing housing to become available to a lower income group the housing not only must be offered at a price which the lower-income families can and will pay, but these families must also be free to move to a new location in order to consume the housing. Seen in this light, the special limitations of the filtering process in providing adequately for low-income Negroes and other minority groups that are frequently hemmed in by special covenants and other barriers are striking.

In conclusion, it is perhaps interesting to consider whether Professor Ratcliff's analysis suggests that the rapid blighting of new and middle-aged areas, partly resulting from poor neighborhood design, invasion of incompatible uses and other deteriorating influences, is an important factor in increasing the supply of shelter for low-income families and therefore may not be entirely evil. These influences may help stimulate a demand for new housing upon the part of families who can afford it, increase the rate at which the price of existing housing declines, and thus at considerable cost accelerate the filtering down of shelter, inadequate to be sure, to the lowest income groups. The corollary of this hypothesis is that efforts to stabilize neighborhoods, other things being equal, should be accompanied by increased efforts to supply additional housing directly to low-income families.

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Should Non-Farm Agricultural Land Be Included in the Census of Agriculture?

THE Census of Agriculture has undergone numerous additions, changes, and deletions since it was first taken in 1840; and further alterations will no doubt be needed from time to time to keep pace with changing conditions and needs for information.

One alteration that would greatly improve certain Census statistics, particularly those for the Western States, would be the inclusion in the enumeration of the vast areas of range, forest, and wildlife land that are now excluded. A step in this direction was made in the 1945 Census through the inclusion as farm acreage of Indian grazing land used on a cooperative basis.[1] In previous Censuses much of this Indian land was omitted because it was considered open range. The 1945 Census continued, however, to exclude from farm acreage the public domain, the national forest, and other federal and state lands that are grazed under permit, and also open range neither owned nor leased by those using such range. The effect of this was to exclude from the enumeration at least 300 million acres in the eleven Western States,[2] as shown in the following tabulation:

	Acres
Total land surface as reported in the 1940 Census of Agriculture	753,898,240
Land in farms, 1945 Census of Agriculture (preliminary)	309,337,349
Land not in farms in 1945	444,560,891
Land not available for farming and ranching in the western range country[3]	137,400,000
Approximate area of land used for livestock grazing and pasture but not reported as land in farms in the 1945 Census of Agriculture	307,160,891

The elimination of these large areas from the Census of Agriculture results in incomplete Census statistics on land used for agriculture. Such commonly used statistics as farm land uses, farm tenure, and sizes and types of farms for the public-land states are apt to be misleading unless the limitations of the Census definition are kept closely in mind.

Statistics of acreage in farms were first included in the Census of Agriculture in 1850. It was natural to draw up a definition of land in farms that fitted the pattern of ownership and tenancy common in most of the country at that time. The range livestock boom of the 1880's extended grazing into millions of acres of open public domain, but this was not reported in the Census. Much of this land still continues to be unreported because the tenure arrangements under which the land is used do not fit under the original concepts of farm land tenure. Much of the range land that does not qualify as farm land under the Census definition is fully as productive of forage per acre as range land that is reported as farm land in the Census.

It would seem appropriate now to expand the scope of the Census of Agriculture to provide coverage of all agricultural land, including publicly-owned grazing, forest and wildlife areas and open, privately-owned lands. This could be accomplished in several ways, but two ways seem most feasible.

One procedure would be to recognize in the Census that the use-permit systems of the Forest Service, Grazing Service, and other federal and state land management agencies are forms of farm tenancy, and to include all land used under these systems as land in farms. Also recognized as land in farms would be private land pastured or grazed without rental. The effect would be to include as land in farms all public or

[1] U. S. Bur. of the Census. Preliminary compilation of number of farms and acres in farms in the United States, by counties: *1945 Census of Agriculture*, Washington, D. C., November 30, 1945.

[2] Washington, Oregon, California, Idaho, Nevada, Montana, Wyoming, Utah, Arizona, Colorado, and New Mexico.

[3] As estimated in *The Western Range*, Senate Document No. 199, 74th Congress, 2d Session, 1936. This land consists of 68 million acres in dense forests, 59 million acres barren or inaccessible, 8.4 million acres closed to grazing to protect water supplies or for other reasons, and 2 million acres in cities, towns, railroads and highway right-of-ways. The area covered by these estimates lies to the west of an irregular north and south line cutting through the Dakotas, Nebraska, Oklahoma, and Texas, and includes 975 million acres as compared with 754 million acres in the eleven Western States. Most of the dense forests and barren or inaccessible areas, however, are in the eleven Western States.

private agricultural land held under any form of tenure and regardless of method of payment of fees or rentals. Accomplishment of this procedure might cause the Census enumerators some difficulty in reporting acreage used as community pastures or common grazing areas. In this case, apportionment of the acreage to the users could be made on the basis of proportion of use or of animals permitted.

Adoption of this first procedure would cause a large increase in the 1950 Census figures of land in farms and items, such as pasture and woodland in farms, and these figures would not be directly comparable with the figures for the preceding years. The Census-to-Census comparability of figures on land in farms has already been reduced by recent changes in grazing land tenure in the Western States. For example, land in farms in the eight Mountain States increased 24 percent between 1940 and 1945, caused partly by the inclusion of grazing land not previously reported as land in farms.[4]

The second procedure would not require such a drastic break with tradition. That part of the land used for agriculture that is not considered as land in farms under the traditional Census definition could be enumerated on a supplementary schedule and the tabulations could be published as a supplementary series. This would have some advantages over forcing all land into the category of land in farms. Comparisons with previous Censuses could be made more readily, and the concept would correspond more nearly to that now used with respect to land that is considered as being in farms. It would be necessary, however, to combine the data on farm and nonfarm land in order to obtain satisfactory information on such items as size distribution and tenure status of operating units that make use of both farm and nonfarm agricultural land.

The data that would be forthcoming from the proposed alteration to the Census of Agriculture, regardless of the mechanics employed, would help fill a need for more complete basic information regarding the range and forest agriculture of the public-land states.

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[4] U. S. Bur. of the Census, *op. cit.*

Relationship Between Condition of Dwellings and Rentals, by Race*

THAT racial minorities occupy a disproportionately high amount of substandard housing in the United States has been indisputably proved as has the truism that excessively low incomes contribute to this fact. But the extent to which the operations of the discriminated housing market limit the access of racial minorities, at *every income level*, to decent housing has not been satisfactorily demonstrated. The need for additional research on this factor has long been apparent.[1]

In this, as in many areas of housing, the 1940 Census contains relatively comprehensive data heretofore unavailable as a basis for analysis. It is thus possible to show for the first time on an extensive scale[2] the relationship between the condition of dwelling units and rental value by race of occupants as evidence of the fact that racial minorities receive proportionately less housing value for the same price than do white

* The writer gratefully acknowledges the assistance of Dr. Robert C. Weaver of the American Council on Race Relations, Dr. B. T. McGraw of the National Housing Agency, and Dr. Frank S. Horne of the Federal Public Housing Authority. The views and opinions expressed in this article do not necessarily represent those of the National Housing Agency.

[1] See Gunnar Myrdal, *An American Dilemma*, Vol. I, p. 379, (New York—1944) Harper and Bros.

[2] Among the analyses based upon small samples which have made some contribution to this subject are two studies sponsored by the Pittsburgh Housing Association (see Pittsburgh Housing Association, *Housing in Wartime Pittsburgh 1942-1943* and *Housing in Wartime Pittsburgh 1943-1945*), and one appearing in the results of the test surveys conducted by the Subcommittee on Appraisal of Residential Areas, Committee on the Hygiene of Housing, American Public Health (see U. S. Public Health Service, *An Appraisal Technique for Urban Problem Areas as a Basis for Housing Policy of Local Governments*, U. S. Government Printing Office, Washington, 1942—Reporting No. 2359 from the Public Health Reports).

TABLE 1. DISTRIBUTION IN RENTAL VALUE BRACKETS AND RELATIONSHIP BETWEEN CONDITION OF DWELLING UNITS, BY RACE OF OCCUPANTS, FOR 16 NORTHERN AND WESTERN CITIES AND 26 SOUTHERN METROPOLITAN DISTRICTS

ESTIMATED MONTHLY RENTAL VALUE	DISTRIBUTION IN RENTAL VALUE BRACKETS						SUBSTANDARD UNITS 1/ AS PERCENT OF TOTAL UNITS OCCUPIED BY RESPECTIVE RACIAL GROUP IN EACH RENTAL BRACKET								
	ALL OCCUPIED UNITS		OWNER OCCUPIED UNITS		TENANT OCCUPIED UNITS		ALL OCCUPIED UNITS			OWNER OCCUPIED UNITS			TENANT OCCUPIED UNITS		
	WHITE	NON-WHITE	WHITE	NON-WHITE	WHITE	NON-WHITE	WHITE	NON-WHITE	RATIO N to W	WHITE	NON-WHITE	RATIO N to W	WHITE	NON-WHITE	RATIO N to W
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
A. TOTAL ALL REPORTING STATE OF PLUMBING AND REPAIRS:															
NUMBER	6,365,845	850,063	1,990,972	125,420	4,374,873	724,643	-	-	-	-	-	-	-	-	-
PERCENT	100.0	100.0	100.0	100.0	100.0	100.0	19.3	58.2	3.0	12.8	45.9	3.9	22.3	60.4	2.7
UNDER $5	.5	3.6	.7	5.5	.5	3.3	90.2	97.6	1.1	86.6	97.3	1.1	93.3	97.7	1.0
$5 - $9	2.7	18.0	1.8	14.5	3.1	18.6	87.7	94.7	1.1	77.4	89.9	1.2	90.5	95.3	1.1
$10 - $14	6.9	22.0	4.0	18.0	8.3	22.5	69.4	79.4	1.1	53.8	70.3	1.3	72.8	80.6	1.1
$15 - $19	9.7	15.6	6.6	14.1	11.1	15.9	42.1	55.3	1.3	31.9	45.0	1.4	44.8	56.9	1.3
$20 - $24	11.6	12.8	9.6	11.7	12.4	13.0	25.0	43.8	1.8	19.3	30.0	1.6	27.0	45.9	1.7
$25 - $29	12.4	9.1	11.6	9.6	12.7	9.0	14.4	31.0	2.2	12.0	19.8	1.7	15.4	33.1	2.1
$30 - $39	22.4	10.5	21.8	12.5	22.7	10.1	7.7	20.9	2.7	7.2	14.2	1.9	7.9	22.4	2.8
$40 - $49	15.0	4.7	16.1	6.2	14.6	4.5	4.0	13.5	3.4	4.6	11.3	2.5	3.7	13.9	3.8
$50 - $59	7.8	2.0	10.3	3.4	6.7	1.7	3.2	10.9	3.4	3.7	8.2	2.2	2.9	11.8	4.1
$60 - $74	5.4	1.1	8.1	2.4	4.1	.9	2.8	9.1	3.3	3.1	6.9	2.2	2.5	10.2	4.1
$75 - $99	3.0	.4	4.9	1.1	2.1	.3	2.7	10.7	3.9	2.8	7.3	2.6	2.6	12.9	5.0
$100 AND OVER	2.6	.2	4.5	1.0	1.7	.2	2.8	13.4	4.8	2.6	8.5	3.3	3.0	17.4	5.8
B. 16 NORTHERN AND WESTERN CITIES ALL REPORTING STATE OF PLUMBING AND REPAIRS:															
NUMBER	4,772,155	427,648	1,312,025	42,935	3,460,130	384,713	-	-	-	-	-	-	-	-	-
PERCENT	100.0	100.0	100.0	100.0	100.0	100.0	16.5	44.9	2.7	9.8	24.3	2.5	19.1	47.2	2.5
UNDER $5	.2	.6	.2	1.1	.1	.6	76.5	95.1	1.2	62.9	92.8	1.5	84.4	95.5	1.1
$5 - $9	1.5	5.8	.7	4.4	1.8	5.9	87.3	93.9	1.1	67.1	85.1	1.3	90.4	94.7	1.0
$10 - $14	5.5	14.4	2.7	8.3	6.6	15.1	71.7	81.1	1.1	48.4	69.6	1.2	75.2	82.4	1.1
$15 - $19	8.7	17.8	5.5	11.6	9.9	18.5	43.1	56.9	1.3	29.1	36.3	1.2	46.9	58.3	1.3
$20 - $24	11.3	17.8	9.3	14.1	12.1	18.2	24.2	44.2	1.8	17.4	23.1	1.3	26.2	46.0	1.8
$25 - $29	12.7	14.1	11.8	15.8	13.0	13.9	13.6	30.0	2.2	11.1	15.3	1.4	14.5	31.8	2.2
$30 - $39	24.3	16.6	23.5	23.1	24.6	15.9	7.1	20.5	2.9	6.7	11.4	1.7	7.5	21.9	3.0
$40 - $49	16.7	7.3	18.1	10.3	16.1	6.9	3.7	13.6	3.7	4.5	10.6	2.4	3.4	14.1	4.1
$50 - $59	8.2	3.0	11.0	4.9	7.2	2.6	3.1	11.5	3.7	3.4	9.5	2.6	3.7	11.9	4.4
$60 - $74	5.5	1.6	8.4	3.2	4.4	1.4	2.6	9.6	3.4	3.4	9.2	2.7	2.4	9.7	4.0
$75 - $99	2.9	.6	4.7	1.7	2.3	.5	2.9	11.9	4.1	3.4	9.6	2.8	2.6	12.7	4.9
$100 AND OVER	2.5	.4	4.1	1.4	1.9	.3	3.2	14.9	4.7	3.3	10.4	3.2	3.1	17.5	5.6
C. 26 SOUTHERN DISTRICTS ALL REPORTING STATE OF PLUMBING AND REPAIRS:															
NUMBER	1,593,690	422,415	678,947	82,485	914,743	339,930	-	-	-	-	-	-	-	-	-
PERCENT	100.0	100.0	100.0	100.0	100.0	100.0	27.7	71.7	2.6	18.4	57.2	3.1	34.6	75.2	2.2
UNDER $5	1.8	6.6	1.8	7.8	1.9	6.3	94.2	97.8	1.0	91.5	97.6	1.1	96.0	97.9	1.0
$5 - $9	6.2	30.4	3.8	19.8	7.9	33.0	88.0	94.9	1.1	81.1	90.5	1.1	90.5	95.5	1.1
$10 - $14	11.3	29.4	6.6	23.1	14.8	31.0	66.1	78.5	1.2	57.9	72.3	1.2	68.7	79.6	1.2
$15 - $19	12.5	13.4	8.7	15.5	15.3	12.9	39.9	53.1	1.3	35.4	48.5	1.4	41.8	54.5	1.3
$20 - $24	12.2	7.8	10.3	10.5	13.7	7.1	27.2	42.8	1.6	22.6	34.8	1.5	29.8	45.7	1.5
$25 - $29	11.6	4.0	11.3	6.5	11.8	3.4	16.9	34.8	2.1	13.9	25.6	1.8	19.1	39.1	2.0
$30 - $39	16.8	4.3	18.4	6.9	15.6	3.6	10.1	22.8	2.3	8.4	19.0	2.3	11.5	24.5	2.1
$40 - $49	10.2	2.1	12.0	4.0	8.8	1.7	5.3	13.2	2.5	5.1	12.3	2.4	5.6	13.7	2.4
$50 - $59	6.6	1.0	8.9	2.7	4.9	.6	3.7	9.0	2.4	3.7	6.9	1.9	3.7	11.3	3.1
$60 - $74	4.8	.6	7.5	2.1	2.8	.2	2.7	7.8	2.9	2.5	5.1	2.0	3.1	13.2	4.3
$75 - $99	3.2	.2	5.4	.8	1.5	.1	2.1	7.2	3.4	1.8	4.7	2.6	2.8	14.9	5.3
$100 AND OVER	2.8	.1	5.3	.3	.9	.0	1.8	7.5	4.2	1.6	4.7	2.9	2.8	16.5	5.9

SOURCE: Sixteenth Census of the United States, Housing, Vol. III, "Characteristics by Monthly Rent or Value," Tables 2, 3, and 5a.

1/ Units needing major repairs or with plumbing deficiencies.

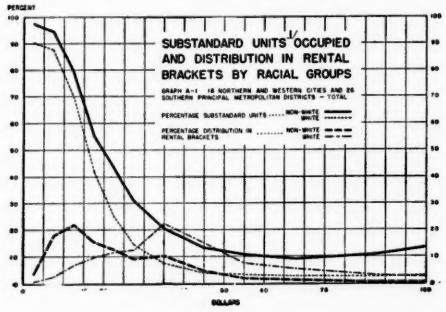
families who have access to the open housing market.

Condition of Dwellings and Rental Value

This study is based upon U. S. Census data for 6,365,845 units occupied by white families and 850,063 units occupied by non-white families in 16 northern and western cities[3] and 26 southern principal metropolitan districts.[4] The number of substandard units[5] occupied by white families is 1,229,883 (19.3 percent); by non-white families, 494,990 (58.2 percent).

Analysis of the relationship between the condition of dwellings and rental value for units occupied by white families and those occupied by non-white families[6] reveals that the non-white group receives proportionately more substandard housing than does the white group for the same rent or rental value.

As indicated in Table 1 and Graph A-1, this obtains for all rental ranges. It may be observed in column 9 of the table, for the total sample, that the ratio of the non-white occupied substandard units to the white occupied units in this category begins at 1.1 in the interval under $5 and consistently ascends to 4.8 at the highest rental value level. Above the $29 interval, where almost a fifth of the non-white group and over half of the white group are concentrated (columns 1 and 2), the ratio of non-whites to whites living in substandard housing approximates three to one and reaches almost four to one and five to one, respectively, (columns 8 and 9) in the two highest rental intervals. Although the majority of the non-white group is concentrated in the lower rental value brackets where the incidence of substandard housing is greatest and the discrepancy between the two racial groups is least, it may be observed that the highest percentage of whites (22.4) for all rental brackets and the highest percentage of non-whites (10.5) above the $24 level are found in the $30-$39 interval where the ratio of non-whites to whites occupying substandard housing is almost three to one (2.7). The comparison is clearly portrayed in Graph A-1.



Tenure. Of the total 6,365,845 units occupied by the white group, 1,990,972 are owner-occupied and 4,374,873 are tenant-occupied. Of the total 850,063 units occupied by the non-white group, 125,420 are owner-occupied and 724,643 tenant-occupied.

The number of substandard units occupied by the white owners is 253,859 (12.8 percent); by non-white, 57,606 (45.9 percent).

The number of substandard units occupied by white tenants is 976,024 (22.3 percent); by non-white, 437,384 (60.4 percent).

In both the owner (column 12) and tenant (column 15) groups, the non-whites consistently and in all rental value ranges occupy a proportionately higher percentage of substandard housing than do the whites. In the rental brackets above $24, the non-white tenants receive a higher proportion of substandard housing as compared with the white tenants (column 15) than

[3] Camden, N. J.; Chicago, Ill.; Cincinnati, Cleveland, and Columbus, Ohio; Detroit, Mich.; Gary and Indianapolis, Ind.; Kansas City, Kans.,; Kansas City, Mo.; Los Angeles, Cal.; Newark, N. J.; New York, N. Y.; Philadelphia and Pittsburgh, Pa.; St. Louis, Mo.

[4] Atlanta, Ga.; Baltimore, Md.; Birmingham, Ala.; Charlotte, N. C.; Chattanooga, Tenn.; Cincinnati, Ohio (in part); Dallas, Ft. Worth, and Houston, Tex.; Huntington, W. Va.; Ashland, Ky. (in part); Jacksonville, Fla.; Knoxville, Tenn.; Louisville, Ky. (in part); Memphis, Tenn.; Miami, Fla.; Nashville, Tenn.; New Orleans, La.; Norfolk-Portsmouth-Newport News, Va.; Oklahoma City, Okla.; Richmond, Va.; San Antonio, Tex.; Tampa-St. Petersburg, Fla.; Tulsa, Okla.; Washington, D. C.; Wheeling, W. Va. (in part); Wilmington, Dela. (in part).

[5] There is no classification of units as "substandard" in the U. S. Census. In this analysis, consistent with prevailing practice, all units in need of major repairs or with plumbing deficiencies are classified as substandard.

[6] The color classification used in the 1940 U. S. Census data involves two major categories, white and non-white. Persons of Mexican birth or ancestry who were not definitely Indian or of other non-white races were returned as white in 1940. The non-white category, comprising over 95 per cent Negroes, includes other non-white races such as Indians, Chinese, and Japanese. *Cf., U. S. Sixteenth Census, 1940, Population,* Vols. I, II, III; *Statistical Abstract of U. S.,* 1942, p. 18.

do the non-white owners as compared with the white owners (column 12). The ratios of non-white to white tenants occupying substandard housing practically double those for the owners in the four highest rental value brackets. At the $30-39 bracket, the highest interval of concentration above the $24 level, the ratio for the owner-occupied units is 1.9 as compared with 2.8 for the tenant-occupied group.

The discrepancy between white owners and white tenants (columns 10 and 13) is less than that between non-white owners and non-white tenants (columns 11 and 14). Between the $40 and $100 ranges, the white tenants occupy a slightly lower proportion of substandard housing than do the white owners. At no point, however, does this occur as between the non-white owners and non-white tenants, and the discrepancy between these groups is distinctly marked in the rental brackets above the $24 level, which sharply ascends from the $50 level until doubled at the highest bracket.

Geographical Areas. In the northern and western cities, 788,955, or 16.5 percent of the total 4,722,155 units occupied by the white group, are substandard. In the southern districts, 440,928, or 27.7 percent of the total 1,593,690 units occupied by the white group, are substandard. The comparable data for the non-white group are 192,053 substandard units representing 44.9 percent of the total 427,648 in the northern and western localities; and 302,937 substandard, or 71.7 percent of the total 422,415 in the southern districts. The ratios, non-white to white, in substandard housing, almost identical for the northern and western group and for the southern group in the rental brackets to the $20 level, are significantly greater for the northern and western areas than for the southern districts from the $20 level up to the $75. It is observed that 79.8 percent of the southern and 38.6 percent of the northern and western non-white group are concentrated in the brackets under $20, where the ratios of non-white to white are similar in the two areas; but only 19.2 percent of the southern as contrasted to 58.8 percent of the northern and western non-white group is concentrated in the brackets where the ratios are higher in the northern and western cities.

From the lowest rent interval to $10, a slightly higher proportion of substandard housing is occupied by the non-white group in the southern districts than in the northern and western localities; higher for the northern and western cities up to the $25 level; then again reverses up to the $40 level from which point the proportion of substandard housing for the non-whites in the northern and western cities steadily rises above their proportion in the southern districts.

Although the white occupants for the two areas run much closer together in proportions of substandard housing, the trends for the two racial groups in this respect run roughly parallel up to the $40 range, at which point the proportion of substandard housing occupied by the white group in the southern districts steadily drops to a lower level than for the northern and western districts, falling only slightly below the latter beyond the $60 interval. This is practically the reverse of the trend for the non-white group.

Tenure by Geographical Areas. Of the total 4,772,155 white occupied units in the northern and western cities, 1,312,025, or 27.5 percent, are owner-occupied; 3,460,130 or 72.5 percent, tenant-occupied. Of the total 427,648 non-white occupied units in these localities, 42,935, or 10.0 percent, are owner-occupied; 384,713 or 90.0 percent, tenant-occupied.

For the southern districts, comparable data are: total white occupied units 1,593,690, with 678,947 (42.6 percent) owner-occupied and 914,743 (57.4 percent) tenant-occupied; total non-white occupied units 422,415, with 82,485 (19.5 percent) owner-occupied and 339,930 (80.5 per cent) tenant-occupied. The number of white owner-occupied substandard units in the northern and western cities, 129,092 (9.8 percent); for the southern localities, 124,767 (18.4 percent). The number of white tenant-occupied substandard units, northern and western, is 659,863 (19.1 percent); for the southern districts, 316,161 (34.6 percent). Comparable data for the non-white group are: northern and western 10,436 owner-occupied substandard units (24.3 percent); southern 47,170 substandard (57.2 percent); northern and western 181,617 tenant-occupied substandard units (47.2 percent), and southern 255,767 (75.2 percent).

The ratio of non-white to white occupancy in substandard units is greater for the

owner group in the northern and western areas, as compared with the tenant group in that area only in the three lowest rental ranges under $15. In the southern group, however, these ratios are identical in the brackets between $5 and $15, $20-$24, and $40-$49; and very slightly greater for the owner group only in the lowest bracket, the $15-$19 and the $30-$39.

The ratio of non-whites to whites in substandard housing is greater in the northern and western areas than in the southern districts for owners in the two lowest brackets under $10, and in the four highest brackets over $50; but for tenants it is greater in the lowest and in the five middle brackets between $20 and $60. It is observed that 19.2 percent of the southern and 58.8 percent of the northern and western non-white group is concentrated in the five middle brackets designated.

Only in the northern and western areas do the white tenants receive less substandard housing than do white owners in any rental bracket. This occurs in the brackets above $40. In all cases, the non-white tenant receives a distinctly higher proportion of substandard housing than does the non-white owner in the same rental ranges. In the northern and western areas the proportion of non-white tenants in substandard housing to non-white owners is double in the brackets between $20 and $40, where 48.5 percent of the non-whites in this area are concentrated. In the southern areas the proportions for tenants as compared with owners are excessive in the four brackets above $49, ranging from two to one through four to one.

Both white and non-white northern and western owners in each rental bracket up to $50 occupy a lower proportion of substandard housing than do the corresponding white and non-white owners in the southern districts.[7]

Procedure[8]

The data used for this analysis were extracted from the 1940 Census[9] Table 2 (owner-occupied dwelling units), Table 3 (tenant-occupied dwelling units), and Table 5a (dwelling units occupied by non-white households), for the 16 individual northern and western cities (48 tables) and the consolidated southern principal metropolitan districts (3 tables).

Only occupied units reporting state of plumbing and repair were used. White occupancy data were determined by subtracting the units occupied by non-whites from the totals for each rental bracket. Dwelling units by tenure were added to compute the totals.

Dwelling units were classified by those (a) with private bath and private flush toilets, (b) *needing major repairs,* and (c) *with plumbing deficiencies but not needing major repairs.* The latter two were combined for each category as the number of substandard units.

Validity of Findings

The primary reason for the deficiency in this area of research is the difficulty of establishing the *comparability* of the dwelling units occupied by white and Negro households since houses are, in fact, not comparable.[10] Thus, the statement that Negroes pay more for *equal* facilities has been subject to challenge. The approach taken in this analysis, however, is not concerned with the "equality" of the houses compared, but only with their identification as *substandard* units. The degree of substandard condition, number of rooms, and other similar criteria for comparative appraisal of housing standards are disregarded in this analysis. Consequently, the findings are conservative.

Statistical demonstration to the effect that all of these substandard conditions characterize a larger proportion of housing occupied by non-whites than by whites is legion. For example, the median number of rooms in white occupied dwellings is 4.9; for Negro-occupied dwellings, 3.5—*a difference of more than one room.*[11]

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[7] This would suggest further exploration of the popular assumption that *standard* housing in the South is less costly than standard housing in other geographical regions.

[8] The writer gratefully acknowledges the invaluable assistance of Mrs. Ethel Graham Greene of the Federal Public Housing Authority and Mr. Herman A. Washington of the National Housing Agency.

[9] U. S. Department of Commerce, *16th Census of the United States, 1940, Housing,* Vol. III, "Characteristics by Monthly Rent or Values," (Government Printing Office, Washington, D. C., 1943).

[10] *Cf.,* The Twentieth Century Fund, *American Housing—Problems and Projects* (New York; 1944), p. 39.

[11] U. S. Department of Commerce, *16th Census of the United States, 1940 Housing,* Vol. II, Pt. 1, p. 30, Table 8-e.

It is, of course, necessary to assume that the Census classification of units by state of plumbing and repair, may be validly interpreted in terms of substandard condition of dwellings.

The basic assumption of this analysis is: If there were no racial factors operating to limit the supply of housing available to Negroes, the units they occupy, distributed by rental groups, would generally tend to fall into the same classification, by state of repair and plumbing, as those occupied by white households.

The Sample. The total number of units comprising the sample represents 38 percent of the 19,138,800 urban occupied units reporting state of plumbing and repairs in the United States.

For the white group alone, the sample represents 36 percent of the 17,539,251 urban units reporting state of plumbing and repairs. For the non-white group, the comparable figure is 53 percent of 1,599,549 urban.

While 72 percent of the total units in the sample is located in the northern and western cities, and 75 percent of the white occupied units is so located, the non-white units were equally divided between the two geographical areas.

Geographical Areas. A question of validity might be raised with respect to the comparison between the two geographical areas since regional differentials in cost would affect the comparability of units in the same rental brackets. But there is no indication in the data presented that such cost differentials operate extensively, if at all, for the highest proportion of substandard housing occupied by the white group in the rental brackets where almost 70 percent of the total housing for this group is concentrated, is in the southern districts. Thus, it would appear that even the white group receives less housing value per dollar in the southern than in the northern and western areas.

Furthermore, the trends for the two racial groups in the compared areas do not move along parallel lines through the upper rental value brackets as would appear to be the case were the regional difference due solely to differences in cost.

Conclusions

1. The non-white group receives proportionately more substandard housing, or less housing value, for the same price than does the white group, which has access to the open housing market.

2. The progressive increase in the ratio of non-white to white occupancy in substandard housing for each succeeding rental bracket from the lowest to the highest clearly indicates that operation of the discriminated housing market, as a factor independent of comparable rent-paying ability, is a major cause for the excessive occupancy of non-whites in substandard housing.

3. The general rank order from the highest to the lowest proportion of occupancy in substandard housing, by tenure, is (1) *white* owners, (2) *white* tenants, (3) *non-white* owners, (4) *non-white* tenants.

4. The fact that the ratio of non-whites to whites in substandard housing is markedly greater for the tenant-occupied units as compared with those occupied by owners indicates that the non-white tenant suffers an even greater disadvantage than does the non-white owner when competing for decent housing in the discriminated housing market. The importance of this is amplified by the fact that white tenants receive a lower proportion of substandard housing than do white owners in the rental ranges between $40 and $75.

5. The ratios of non-whites to whites in substandard housing is greater in the northern and western cities than in the southern metropolitan districts between the $20 and $75 rental levels; and, above the $40 rental level, the proportion of substandard housing occupied by the non-white group in the northern and western cities is markedly greater than is the proportion for the same racial group in the southern metropolitan districts.

6. The general rank order from the highest to the lowest proportion of occupancy in substandard housing, by region, is (1) *white* in the northern and western cities, (2) *white* in the southern districts, (3) *non-whites* in the northern and western cities, (4) *non-white* in the southern districts.

7. Contrary to the experience of non-white tenants in any category, the white tenants in the northern and western areas occupy less substandard housing in the rental brackets above the $40 level than do white owners in these brackets.

8. In the northern and western areas, the proportion of non-white tenants to non-

white owners in substandard housing is double in the brackets between $20 and $40, where almost half of the non-whites in this area are concentrated.

9. The general rank order from the highest to the lowest proportion of occupancy in substandard housing, by regions and tenure, is (1) *white owners* in northern and western cities, (2) *white owners* in southern districts, (3) *white tenants* in northern and western cities, (4) *non-white owners* in northern and western cities, (5) *white tenants* in southern districts, (6) *non-white tenants* in northern and western cities, (7) *non-white owners* in southern districts, (8) *non-white tenants* in southern districts. The only instance in which the non-white group occupies a smaller proportion of substandard housing than the white group is in the case of non-white owners in northern and western cities which ranks higher than do the white tenants in southern districts.

10. The differentials revealed in this analysis may be imputed to the effect of residential racial restrictions. This is supported by the fact that the proportionate differentials between the two racial groups are greatest in the higher rental value brackets where racial restrictive practices operate to maintain a highly discriminatory market, and in the northern and western cities where the in-migration of non-whites from the South has accentuated racial restrictive practices and greatly accelerated the market in the constricted areas to which the non-white group is arbitrarily confined.

Cost of Credit. Another factor relevant to the findings in this analysis is the comparative cost of credit as between the two racial groups. Table 2, based upon 1940 Census date,[12] strikingly reveals that the non-white group pays higher interest rates on first mortgages[13] to every category of mortgage holder except the Home Owners Loan Corporation—an agency of the federal government under which uniform interest rates are mandatory.

The bulk of first mortgages for the non-white group is held by the sources of credit which charge the highest interest rates. Thus, 31.9 percent of the total is held by individuals at the highest average interest rate, 6.52 percent. The second highest concentration of the non-white group occurs for the Building and Loan Associations at an average interest rate of 6.04 percent. The average value of property held by the non-white group is closer to the total in this category than in any of the others.

While none of the average interest rates for all groups reach the six per cent level, 87,684 first mortgages for the non-white group, comprising 73 percent of their total 119,364, are in excess of six percent—ranging from 6.02 to 6.52 percent.

Very low proportions of first mortgages for the non-white group, as compared with the white group, are held by life insurance companies, savings banks and commercial banks. Almost all FHA-insured mortgages are available from these institutions.

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[12] U. S. Department of Commerce, *16th Census of the United States, 1940, Housing,* Vol. IV, "Mortgages on Owner-Occupied Non-Farm Homes," (Government Printing Office, Washington, D. C.: 1943).

[13] Data with racial breakdowns are available only for first mortgages. Since there are many indications that an excessively high proportion of non-white owners resort to junior mortgages for home financing, additional research is needed in this area.

An Appreciation of Leonard A. Salter, Jr.

(On the occasion of a Memorial Service in Madison, Wisconsin, June 25, 1946)

THE late Oliver Wendell Holmes, Jr., made a statement in January, 1899, which included the following passage:

"The place for a man who is complete in all his powers is in the fight. The professor, the man of letters, gives up one half of life that his protected talent may grow and flower in peace. But to make up your mind at your peril upon a living question, for purposes of action, calls upon your whole nature."

We are assembled here today to give honor to a young man who by thought and deed epitomized the Holmes' recommendation of combining academic learning with vigorous participation in the practical af-

fairs of the world beyond the campus boundaries. He demonstrated, in a most convincing manner, that a scholar can find the best kind of subject matter for his investigations by going out into the non-academic world and studying at first hand the situations and difficulties which confront people.

Leonard Salter had deep convictions regarding the need, the opportunity, and the effectiveness of organized research and scholarly analysis in helping citizens in a democracy to improve their levels of living. All over the world he saw convincing evidence that the biggest obstacles to a better life for men and women everywhere are the relationships of man to man, and the need for more knowledge and understanding of economic and social problems.

He had great faith in the inherent competence of people to make wise decisions on economic matters, provided they are given the essential facts, and they really understand the alternatives that are open to them. In helping to find these facts, and in the careful analysis of these facts, Leonard Salter took large satisfaction. This was the life work he had chosen. He knew his task was difficult, and that the tools the social sciences have developed so far are less adequate than could be desired; but he also knew the need was urgent, and the problems would not wait until neat answers could be found for all the questions that skeptics and the timid might ask.

No one ever heard Leonard Salter accept a defeatist or do-nothing philosophy. For him life was a challenge to make the largest possible individual contribution to the social welfare. His faith was in careful and penetrating research, to find the essential facts, and then the marshalling of the facts in such manner as to show the way in which the larger *public* interest would best be served.

Few persons I have ever known were as capable of objective thinking as Leonard Salter. Always his emphasis was on the idea, the project, or the job to be done, and not on who initiated the proposal, or who would get the credit. He could defend his intellectual position with great competence, but he was quick to yield when evidence was presented that his contention was contrary to the important facts involved.

If any man of my acquaintance deserves to be called brilliant, surely the term could appropriately be applied to Leonard Salter. But with all of his keenness of intellect he never lost the common touch. Leonard Salter liked people, people just as they are with all of their variability and their limitations, as well as their God-given traits of unselfishness and idealism.

He could be impatient with people who were complacent in situations that cried for action. Always it was hard for him to understand anyone who preferred inaction to attempts to improve conditions that were clearly not what they should be, or could be. He had intellectual and moral courage of a very high order. I think Justice Holmes would have especially admired him for this quality that all who knew him were quick to recognize.

Leonard Salter appreciated that all of us need incentives and purposes that are higher than economic self-interest if we are to build a human society that is decent, that gives adequate recognition to individuals, and that is ever charged with enlightened discontent with anything less than the best that is in us.

Fortunate indeed is a university and a state that can attract such personalities as Leonard Salter. I can make no better wish for our university than that we will provide an environment in which men like Leonard can contribute the most to the onward march of civilization as it climbs upward to the heights.

NOBLE CLARK

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Public Utility Financing in the Second Quarter of 1946

DURING the second quarter of 1946 public utility security offering increased sharply. The offerings totaled $794 millions for the second quarter. This is an increase of $639 millions over the first quarter of 1946. During the first six months of 1946 the largest share of the total corporate financing was in public utilities. The total of $951 millions of public utility financing was the greatest since 1936. Over

one-half of the issues offering in the second quarter were offered in May.

Public utility long-term debt issues sold publicly are shown in Table I. The nineteen issues listed total $492 millions. The largest issue was the $50 million Wisconsin Electric Power Co. 2⅝'s of 1976 which was offered in June at 101.56% of par to yield 2.55%. The second and third largest issues respectively were the $45 million Illinois Power Company 2⅞'s of 1966 offered in May at 101.54% of par to yield 2.75% and the $44.6 million Consolidated Gas, Electric Light and Power Company of Baltimore 2¾'s of 1981 offered in May at 104.50% of par to yield 2.55%.

The $2.2 million Harrisburg Gas Company issue of 1971 offered in April at 102.689% of par had the lowest offering yield of 2.48% of par. The St. Joseph Light and Power Company 2⅝'s of 1976 and the Philadelphia Electric Power Company 2⅝'s of 1975 both had offering yields of 2.50% of par. The St. Joseph Light and Power Company 2⅝'s of 1976 had the lowest net cost to company (2.55%) after allowance for underwriters' commissions and estimated incidental expenses.

The weighted average offering yield on publicly offered issues was 2.69%. The range of the underwriters' spread was from .41% for the Wisconsin Electric Power Company 2⅝'s of 1976 to 1.125% for the Tennessee Gas and Transmission Company 2¾'s of 1966. The weighted average of the underwriters' commissions was .69% which is .37% below the average for the first quarter of 1946. The weighted average cost to company was 2.33%. This is a significant decrease from the 2.77% weighted average of the first quarter of 1946.

Public utility long-term debt securities

TABLE I—SUMMARY AND ANALYSIS OF PUBLIC UTILITY LONG-TERM DEBT ISSUES OFFERED PUBLICLY, SECOND QUARTER, 1946

Company and Issue (A)	Coupon Rate (B)	Principal Amount (C)	Maturity Date (D)	Month of Offering (E)	Offering Price (F)	Offering Yield (G)	Underwriters' Commissions (H)	Proceeds to Company (I)	Estimated Incidental Expenses (J)	Net Proceeds (K)	Cost to Company (L)
	%	$			%	%	%	%	%	%	%
Harrisburg Gas Co. First Mortgage	2⅝	2,200,000	1971	April	102.689	2.48	[1]	[1]	[1]	[1]	[1]
St. Joseph Light & Power Company First Mortgage	2⅝	3,750,000	1976	April	102.63	2.50	.70	101.93	.52	101.41	2.55
Tennessee Gas & Transmission Co. First Mortgage	2¾	35,000,000	1966	April	101.50	2.57	1.125	100.375	.56	99.815	2.76
Central Maine Power Co. First & General Mortgage	2¾	13,000,000	1976	May	102.00	2.65	[1]	[1]	[1]	[1]	[1]
Consolid. Gas Elec. Lt. & Pr. Co. Balti. First Mortgage	2¾	44,660,000	1981	May	104.50	2.55	.95	103.55	.29	103.26	2.59
Illinois Power Co. First Mortgage	2⅞	45,000,000	1976	May	102.54	2.75	.50	102.04	.42	101.62	2.80
Illinois Power Co. Sinking Fund Debentures	2¾	9,000,000	1966	May	101.54	2.65	.50	101.04	[1]	[1]	[1]
Jersey Central Power & Light Co. First Mortgage	2⅞	34,500,000	1976	May	103.00	2.73	.72	102.28	.71	101.57	2.80
Mountain States Tel. & Tel. Co. Debentures	2⅝	35,000,000	1986	May	101.87	2.55	.46	101.41	.36	101.05	2.58
Ohio Public Service Co. First Mortgage	2¾	32,000,000	1976	May	101.00	2,70	[1]	[1]	[1]	[1]	[1]
Scranton-Spring Brook Water Serv. Co. First Mortgage	2⅞	23,500,000	1976	May	102.50	2.75	1.10	101.40	.51	100.89	2.83
Utah Power & Light Co. First Mortgage	2¾	32,000,000	1976	May	101.50	2.68	.85	100.65	.55	100.10	2.75
Central Indiana Gas Co. First Mortgage	2⅞	3,250,000	1971	June	101.625	2.78	.595	101.03	1.54	98.49	2.95
Gulf States Utilities, Inc. First Mortgage	2⅝	27,000,000	1976	June	101.49	2.55	.72	100.77	.53	100.24	2.61
Iowa Public Service Co. First Mortgage	2¾	13,750,000	1976	June	101.75	2.67	.71	101.04	[1]	[1]	[1]
Mountain States Tel. & Tel Co. First Mortgage	2⅝	35,000,000	1986	June	101.87	2.55	.46	101.41	.36	101.05	2.58
Pennsylvania Electric Co. First Mortgage	2¾	23,500,000	1976	June	102.47	2.63	.69	101.78	.43	101.35	2.69
Philadelphia Electric Power Co. First Mortgage	2⅝	30,000,000	1975	June	102.567	2.50	.477	102.09	[1]	[1]	[1]
Wisconsin Electric & Power Co. First Mortgage	2⅝	50,000,000	1976	June	101.56	2.55	.41	101.15	[1]	[1]	[1]
Total or Weighted Average		492,110,000			102.59	2.69	.69[2]	100.75[2]	.48[2]	100.13[2]	2.33[2]

[1] Information not available
[2] Exclusive of issues for which information is not available

TABLE II—Summary and Analysis of Public Utility Long-Term Debt Issue Offered Privately, Second Quarter, 1946

Company and Issue (A)	Coupon Rate (B)	Principal Amount (C)	Maturity Date (D)	Monthly Offering (E)	Offering Price (F)	Offering Yield (G)
	%	$			%	%
Shawinigan Water & Power Co. First Mortgage	3	25,000,000	1971	April	[1]	[1]
Arkansas-Missouri Power Co. First Mortgage	2⅞	500,000	1976	May	101.52	2.80
Indianapolis Water Company. First Mortgage	2¾	14,725,000	[1]	May	101.50	[1]
International Telephone & Telegraph Corp. Sinking Fund Debentures,	3	30,000,000	1961	May	[1]	[1]
Northern Utility Company First Mortgage	3½	3,800,000	1964	May	[1]	[1]
General Waterworks Corp.	3½	5,200,000	1971	June	[1]	[1]
Collateral Trust, Kewanee Public Service Co. First Mortgage	3¼	600,000	1976	June	[1]	[1]
TOTAL	.....	79,825,000	.....	.....	.....	.....

[1] Information not available

TABLE III—Summary and Analysis of Public Utility Preferred Stock Issues Offered, Second Quarter, 1946

Company and Issue (A)	Dividend (B)	Principal Amount (C)	Monthly Offering (D)	Offering Price (E)	Offering Yield (F)
	%	$		$	
Central Ohio Light & Power Co.—(Par $100)	3.60	1,200,000	April	102.489	3.51
Peninsular Telephone Co.—(Par $25)	1.00	2,000,000	April	28.00	3.57
Public Service Co. of Indiana. Inc.—(Par $100)	3.50	15,000,000	April	100.00	3.50
Public Service Co. of New Hampshire—(Par $100)	3.35	10,200,000	April	100.00	3.35
Southwestern Public Service Co.—(Par $100)	3.70	2,241,000	April	103.00	3.59
Tennessee Gas & Transmission Co.—(Par $100)	4.10	10,000,000	April	106.00	3.87
Central Maine Power Co.—(Par $100)	3.50	22,000,000	May	101.50	3.45
Indianapolis Power Co.—(Par $100)	4.00	10,000,000	May	115.00	3.48
Jersey Central Power Co.—(Par $100)	4.00	12,500,000	May	103.50	3.86
Ohio Public Service Co.—(Par $100)	3.90	15,630,000	May	102.625	3.80
Philadelphia Suburban Water Co.—(Par $100)	3.65	2,750,000	May	[1]	[1]
Scranton Electric Co.—(Par $100)	3.35	5,324,800	May	101.50	3.30
Scranton Spring Brook Water Service Co.—(Par $100)	4.10	10,000,000	May	102.50	4.00
Union Electric Company of Missouri—(No Par)	3.50	13,910,000	May	107.00	3.27
Western Kentucky Gas Co.—(Par $25)	4.80	283,000	May	26.50	4.63
Iowa Public Service Co.—(Par $100)	3.75	4,250,000	June	101.75	3.69
Pennsylvania Electric Co.—(Par $100)	3.70	10,100,000	June	102.50	3.66
Union Gas System, Inc.,—(Par $100)	5.00	500,000	June	103.00	4.85
Wisconsin Electric Power Co.—(Par $100)	3.60	26,000,000	June	101.00	3.58
Total or Weighted Average		173,888,800			3.60[2]

[1] Information not available
[2] Exclusive of issues for which information is not available

TABLE IV—Issues of Public Utility Common Stock Offered During Second Quarter 1946

Company (A)	Principal Amount (B)	Month of Offering (C)	Offering Price (D)
	$		
Peninsula Telephone Co.—(No Par)	803,970	April	30.00
Tennessee Gas & Transmission Co.—(Par $5)	6,912,500	April	19.75
Central Maine Power Co.—(Par $10)	10,467,296	May	28.00
Indianapolis Power & Light Co.—(No Par)	4,431,977	May	31.00
Public Service Co. of New Hampshire—(Par $10)	4,412,538	May	39.00
California Electric Power Co.—(Par $1)	2,247,677	June	13.25
Mountain States Telephone & Telegraph Co. —(Par $100)	2,572,400	June	100.00
Ohio Edison Co.—(Par $8)	8,421,313	June	41.25
Total	40,269,671		

offered privately during the second quarter of 1946 are shown in Table II. Seven issues totaling $80 millions were offered privately during the second quarter. Two large issues were offered privately. The $30 million International Telephone and Telegraph Corporation 3's of 1961 were offered in May and the $25 million Shawinigan Water Power Company 3's of 1971 were offered in April.

A listing of the preferred stock offerings during the second quarter of 1946 is given in Table III. There were nineteen issues totaling $174 millions with a weighted average offering yield of 3.60%. The total represents an increase of $105 millions over the total preferred stock offered in the first quarter of 1946. The $26 million issue of the Wisconsin Electric Power Company offered at 101.00% of par was the largest issue during the quarter; another large issue was the $22 million issue of the Central Maine Power Company offered at 101.50% of par.

Table IV presents a listing of the public utility common stock offered during the second quarter of 1946. Eight issues totaling $40 millions were offered during the quarter. There is an increasing trend in the amount of common stock issued by utilities. There was nearly twice as much common stock issued during the second quarter of 1946 as during the first quarter. The $10 million Central Maine Power Co. par $10 offered in May at $28 was the largest issue.

During the second quarter there were ten issues of serial notes; the $6 million Ohio Public Service Company, 1.30 to 3%, 1947 to 1956 issue priced to yield 1 to 1.90%, and the $1.5 million Philadelphia Suburban Water Company .50 to 2.50%, due $50,000 semiannually over 15 years. The two issues of serial notes totaling $7.5 millions were all offered in May.

Harold L. Miller

Wisconsin Telephone Company.

Book Reviews

Frontier Landlords and Pioneer Tenants. By Paul Wallace Gates. Ithaca: Cornell University Press, 1945. p. 64.

IN this reprint from the *Journal of the Illinois State Historical Society* for June 1945, Professor Gates carries further the story of western land policy and tenure conditions which by now he has spread through many historical journals. The landlords and tenants he discusses in the present instance were confined largely to the prairie lands of east-central Illinois, though some attention is given to the Scully holdings in Missouri, Kansas, and Nebraska, and some mention is made of an extension of bonanza farming in Indiana. Special attention is given to the holdings of Romulus Riggs, John Grigg, W. W. Corcoran, Isaac Funk, Michael Sullivant, Hiram Sibley, John T. Alexander, Matthew Scott, and Samuel Allerton, and nearly half of the pamphlet is devoted to William Scully and Scullyism.

Some of the landlords, like Sullivant and Alexander, were plungers who ultimately lost out. Scott tried a rental-sales contract with his tenants which sometimes led to the tenants becoming owners in a few years, but which just as often resulted in the land reverting, highly improved at the tenants' expense, to the landlord. Sibley, who took over the Sullivant lands in Ford and Livingston counties, Illinois, seems to have been the model landlord of the era in his dealings with tenants. Sibley farms, well improved and prospering, are still numerous in those counties. Scully, with his Irish-landlord notions, amassed 220,000 acres in four states, including 90,000 acres in Illinois and in addition to 27,000 acres of nonagricultural land in Louisiana. Also, he was the hardest of the lot in the dealings with his tenants. In consequence, he got the poorest tenants and, wherever his farms were found, evidence of lack of agricultural progress was to be seen. Ramshackle huts and rundown fields were the distinguishing landmarks. Much of the political attack on alien landlords was aimed at Scully. A later generation of Scully heirs ameliorated some of the worst of his abuses.

This pamphlet affords little comfort to the adherents of the agricultural-ladder theory of tenancy. Sons of owner-operators often did work up from tenancy to ownership, but "the ladder worked in reverse for many others who, unable to meet the mortgage interest, lost their farms to the banker, the insurance company, or the local money lender." And again: "while critics in the twentieth century were to find that prairie landlordism frequently provided expert farm management and the best of farm practices that were not always found on owner-operated farms, they were to confess that the old dream of owning one's farm was coming to be practically unattainable to a large proportion of prairie residents." (p. 64).

The article is well written, interesting, and informative. Also the proof reading is well done, but the omission of a comma on page 25 reduces Matthew T. Scott's sons from seven to six. Diligent effort uncovered no more serious slips.

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Economic Geography of Canada. By A. W. Currie. Toronto: The Macmillan Company of Canada, Ltd., 1945. pp. 455. $3.50.

PROFESSOR Currie, in his *Economic Geography of Canada,* has produced a book which students and teachers have been seeking for some time. For the student of the Canadian economy, particularly in the field of land economics, this work fills a basic need. It is a conspicuous contribuiton to the limited supply of publications dealing with the elements underlying the great diversity of Canadian problems.

This book is more than a quantitative treatment of the country's resources—"it

tries to set forth the reasons why the figures for the numbers of gainfully employed and the data for net production by industries differ from one Region to another within Canada" (p.18). It is essentially an interpretation of strategic factors as they relate to the main problems. For instance, in Chapter I, where the author deals with "Canada as a Whole," he writes, "In brief, wide disparity in prices of the goods and services exported will cause a world wide depression to impinge with unusual severity on the Canadian economy. The same situation will magnify the prosperity of good times. All this is complicated by the fact that increases in tariffs by foreign countries, especially by Britain and the United States, with whom 80 per cent of Canada's external trade is transacted, may deal shattering blows to the Canadian economy" (p.12).

The country is divided into seven distinct "regions" based mainly upon physiography. These are the Canadian Appalachian, St. Lawrence Lowlands, Prairies, Cordillera, Shield, Mackenzie Valley and Hudson Bay Lowland, and the Tundra. These in turn are dealt with from the standpoint of topography, geology, climate, agriculture, mining, forestry, hydroelectric power, fishing, manufacturing, and recreation.

Professor Currie's concept of economic geography can be well illustrated by a quotation dealing with forestry in British Columbia, the most westerly of the provinces. He states: "A study of the economic geography of forestry in British Columbia falls naturally into a description of the physical resources, the methods of exploitation and the economic problems which have arisen in connection with the industry" (p. 275). While the author does more than "describe" the economic problems pertaining to the natural resources, he does avoid placing major emphasis on discussion of policy.

The last chapter of the book deals briefly with Newfoundland and Labrador. The island of Newfoundland is part of the British Empire but has never entered the Dominion of Canada while Labrador, geologically an extension of the Canadian Shield, is a political dependency of Newfoundland.

Specialists in fields related to economic geography may wish to qualify some statements made in this book. However, such qualifications will not likely be serious divergences of opinion. What the author has done for the economist is to make explicit the geographic factors involved in many of our problems.

BALDUR KRISTJANSON

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